



MANIPUR UNIVERSITY  
CANCHIPUR: IMPHAL

OFFICE ORDER NO./1035

Dated, the 9<sup>th</sup> March, 2026

No. MU/MDS/VAC/FYUP/MU/: In anticipation of the approval of the next Academic Council, the Vice-Chancellor, on the recommendation of the UG Syllabus Drafting Committee, is pleased to approve the following courses as the pool of Multidisciplinary Courses (MDCs) for 2<sup>nd</sup> semester under FYUP. Every student has to select one course from the pool of MDCs. Courses already studied at the 12<sup>th</sup> grade (higher secondary school) level, as well as those offered within the chosen major or minor, cannot be selected. Students may also opt for equivalent/similar courses offered through SWAYAM or other UGC-approved MOOCs, subject to the approval by the University and the affiliated colleges concerned, and such credits shall be duly recognized under the Academic Bank of Credits (ABC). The detailed syllabi and course structures are given in ANNEXURE.

**Multidisciplinary Course (MDC) (3 credits)**

Category	Course Title(s)	Course Code(s)	To be offered/proposed by (Departments)
Natural and Physical Sciences	1. Tribe and Constitution	MDC45ANT102(T)25	Anthropology
	2. Biomolecules	MDC45BIO102(T)25	Biochemistry
	3. Biomolecules	MDC45BTT102(T)25	Biotechnology
	4. Plant Diversity and Utilization	MDC45BOT102(T)25	Botany
	5. Chemistry in Everyday Life	MDC45CHM102(T)25	Chemistry
	6. Environment and Society	MDC45ENV102(T)25	Environmental Science
	7. Fruits and Vegetables Processing Technology	MDC45BFT102(T)25 MDC45BFT102(P)25	Food Technology
	8. Geography of India	MDC45GEG102(T)25	Geography
	9. Environmental Sanitation and Public Health	MDC45GEO102(T)25	Geology
	10. Introductory to Physics	MDC45PHY102(T)25	Physics
	11. Introduction to Animal Diversity-2	MDC45ZOO102(T)25	Zoology
Mathematics, Statistics, and Computer Applications	1. Fundamental of Internet Technologies	MDC45BCA102(T)25 MDC45CSC102(T)25	Computer Science
	2. Elementary Mathematics-I	MDC45MSC102(T)25	Mathematics
	3. Introduction to Statistics II	MDC45STA102(T)25	Statistics
Library, Information, and Media Sciences	1. Electronic Resources Management	MDC45LIS102(T)25	Library & Information Science
	2. Media and AI	MDC45MCC102(T)25	Mass Communication
Commerce & Management	1. Start-Up Venture Management	MDC45COM102(T)25	Commerce
	2. Communication and Personality Development	MDC45BBA102(T)25	Management

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Humanities and Social Sciences	1. Yoga Education	MDC45PES102(T)25	PESS
	2. Bangla Folk Drama and Theatre	MDC45BEN102(T)25	Bengali
	3. Drug Trafficking and Poppy Cultivation	MDC45DSS102(T)25	Defence Studies
	4. Money and Banking	MDC45ECO102(T)25	Economics
	5. AI Trends in Modern Education	MDC45EDN102(T)25 MDC45EDN102(P)25	Education
	6. Fantasy and Science Fiction	MDC45ENG102(T)25	English
	7. Clothing Care and Maintenance	MDC45BFD102(T)25	Fashion Designing
	8. Understanding of Painting, Sculpture, Applied Art, Print Making	MDC45BFA102(P)25	Fine Arts
	9. सामान्य हिंदी लेखन	MDC45HIN102(T)25	Hindi
	10. Introduction to History of Manipur	MDC45HIS102(T)25	History
	11. Women And Development	MDC45HSC102(T)25	Home Science
	12. Introductions to Human Rights.	MDC45HRT102(T)25	Law (Human Rights)
	13. Language planning, Policy and Documentation	MDC45LIN102(T)25	Linguistics
	14. Poetry, Prose, Grammar and Composition	MDC45MAN102(T)25	Manipuri
	15. Mizo Thutluang	MDC45MIZ102(T)25	Mizo
	16. Philosophy & Film	MDC45PHI102(T)25	Philosophy
	17. Gandhi and the Contemporary World	MDC45PSC102(T)25	Political Science
	18. Psychology in Everyday Life	MDC45PSY102(T)25	Psychology
	19. Communication Skills	MDC45BSW102(T)25	Social Work
	20. An Introduction to Sustainable Development	MDC45SOC102(T)25	Sociology
	21. Yoga Education	MDC45YOG102(T)25	Yoga



( Prof. M. Premjit Singh )  
Registrar

Copy to:-

1. A.R. to the Vice-Chancellor, MU
2. Deans, School of Studies, MU
3. Controller of Examinations, MU
4. Heads of Departments, MU
5. Principals of affiliated colleges, Manipur
6. Office Order Book
7. Relevant File

## ANTHROPOLOGY

### MDC45ANT102(T)25: Tribe and Constitution

Nature of Course	Multidisciplinary				
Course Code	MDC45ANT102(T)25				
Course Title	Tribe and Constitution				
Course Level	100				
Credit Details	Total Credit	Lecture/ Week	Tutorial/ Week	Practical/Week	Total Hours/ Week
	3	2	1		3
Course Audience	Semester II students from other departments				
Proposed by (for Non Core courses)	Board of Studies of UG, Department of Anthropology, Manipur University				
Pre Requisites (if any)	Students should have appeared Semester I Examination				
Skill Training Required (if any)	Not Applicable				
Pre-Requisite Course Required (if any)	Not Applicable				
Faculty Eligibility and Specialization (if any)	M.A./M.Sc. in Anthropology, preferably with NET / SLET / Ph.D.				

**Course Objective (Summary):** This course introduces students to the study of tribes and indigenous peoples in India, highlighting their socio-cultural, economic, and political organization. It aims to develop an understanding of tribal diversity and a few selected Particularly Vulnerable Tribal Groups (PVTGs). The course also familiarizes students with constitutional provisions, welfare measures, and policies designed for tribal development.

**Course Learning Outcomes:** Upon completion of the course the learners will be able to

1.	Explain the concept and characteristics of tribes and indigenous peoples.
2.	Identify major tribal groups, particularly PVTGs and their geographical distribution in India.
3.	Describe the socio-economic and political organization of tribes.
4.	Discuss constitutional provisions and welfare measures for tribal communities.

#### Detailed Syllabus Content

Unit	Unit Name	Detailed Syllabus	Credit
I	Introduction	Concept of Tribes and indigenous people, Tribal social organization, Forms of Tribal Economy, Characteristics of tribal economy, Tribal political organization.	1
II	Tribes and diversity	Geographical distribution according to B.S. Guha (1951), Majumdar and Madan (1956), Dube (1960), Roy Burman (1971). Some selected Particularly Vulnerable Tribal Groups of India (PVTGs): Maram, Todas, Birhor, Onges, Saharia.	1
III	Tribal Welfare	Constitutional Provisions and Protective Measures, Fifth Schedule and Sixth Schedule, National Policy of Tribal Affairs 2006, National Commission for Scheduled Tribes, Tribal Sub-Plan (TSP). National Institution for Transforming India (NITI) Aayog.	1

### ***Suggested Readings***

1. Andre Betteille, Backward Class in contemporary India, 1992,
- 2 Chaudhuri, B. (ed). 1990. Tribal Transformation in India. New Delhi: Inter-India.
3. Danda, A.K. 1990. Tribal Economy in India. New Delhi: Inter-India.
4. Dhebar, U.N. 1961. Report of the Scheduled Tribe Commission. New Delhi: Govt. of India.
5. Elwin, V. 1960. Report of the Committee on Special and Multipurpose Tribal Blocks. New Delhi: Govt. of India.
6. Mishra, S.N. 1998. Ownership and Control of Resources among Indian Tribes. New Delhi: Inter-India.
7. Nathan, D. 1998. Tribe-Caste Question. Simla: IIAS.
8. National Tribal Policy (draft). 2006. Ministry of Tribal Affairs. Delhi: Government of India.
9. Indrani Basu Roy, 2005 (reprint), Anthropology-The study of Man, S.Chand and Company Ltd. New Delhi -55.
10. Sharma, 2007 (reprint), Social and Cultural Anthropology, Surjeet Publications, Delhi 007.
11. Vijay S. Sahay and Pradip K. Singh, 1998, Indian Anthropology, B.N.Sen, K.K. Pulications, Allahabad 002.

### ***Additional Readings:***

1. Sharma, B. D. (2001). Tribal Affairs in India: The Crucial Transition. Concept Publishing.

### **Course Teaching-Learning Process**

The important relevant teaching and learning processes involved in this course are;

- Class lectures
- Seminars
- Tutorials
- Group discussions and Workshops
- Question framing
- Statement, reasoning and explanation
- Presentations through Posters and power point

### **Linkage between Programme Learning Outcomes (POs) and Course Learning Outcomes (COs)**

COs / POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	2	1	1	1	3	2	2
CO2	3	2	1	1	1	3	2	2
CO3	3	3	2	2	1	3	3	2
CO4	2	3	2	2	1	3	3	3

0 - No linkage, 1 – low linkage, 2 – medium linkage, 3 – strong linkage

**BIOCHEMISTRY**  
**MDC45BCH102(T)25: Biomolecules**  
**(Theory)**

**Credit: 3**

**Total Hours: 45**

**Course Objective**

The course aims to introduce students to the basic concepts, classification, and biological functions of major biomolecules essential for living systems. It also seeks to build a foundational understanding of how these biomolecules contribute to cellular structure, metabolism, nutrition, and physiological processes.

**Course Learning Outcomes**

On successful completion of the course, students will be able to:

1. Explain the basic concepts, classification, and functions of carbohydrates, lipids, proteins, nucleic acids, vitamins, and minerals.
2. Describe the structural features and biological roles of monosaccharides, lipids, amino acids, proteins, DNA, and RNA.
3. Understand the principles of protein organization and the basic concepts of enzyme action.
4. Differentiate between DNA and RNA based on structure and biological functions.
5. Relate vitamin and mineral deficiencies to physiological disorders and nutritional health.

**Course content**

**Unit 1: Carbohydrates:** Basic concepts, classification, and functions of carbohydrates; monosaccharides; oligosaccharides; polysaccharides.

**Unit 2: Lipids:** Basic concepts, classification, and functions of lipids; cholesterol and phytosterols; micelles, bilayers, and liposomes.

**Unit 3: Amino Acids, Proteins, and Enzymes:** General structure and classification of amino acids; biological functions, classification, and structural organization of proteins; basic concepts of enzymes.

**Unit 4: Nucleic Acids:** Basic concepts of nucleotides and nucleic acids (DNA and RNA); biological functions of DNA and RNA.

**Unit 5: Vitamins & Minerals:** Basic concepts and classification of vitamins; vitamins deficiency diseases. Basic concepts and classification of essential minerals (macro-minerals and trace elements); physiological roles of minerals.

**Suggested Readings**

1. Nelson, D. L., & Cox, M. M. Lehninger Principles of Biochemistry, W.H. Freeman & Company.
2. Satyanarayana, U., & Chakrapani, U. Biochemistry, Elsevier.
3. Berg, J. M., Tymoczko, J. L., & Gatto, G. J. Biochemistry, W.H. Freeman.
4. Murray, R. K. et al. Harper's Illustrated Biochemistry, McGraw-Hill.
5. Voet, D., Voet, J. G., & Pratt, C. W. Fundamentals of Biochemistry, Wiley.
6. Jain, J. L., Jain, S., & Jain, N. Fundamentals of Biochemistry, S. Chand.

**Additional Readings**

1. Devlin, T. M. Textbook of Biochemistry with Clinical Correlations, Wiley.
2. Lodish, H. et al. Molecular Cell Biology, W.H. Freeman & Company.

**Course Teaching–Learning Process**

1. Classroom lectures using chalk-and-board and multimedia presentations.
2. Concept-based teaching supported by diagrams and flowcharts.
3. Use of molecular models and animations for structural understanding.
4. Interactive discussions during and after lectures.
5. Case studies related to nutrition and health.
6. Student seminars on selected biomolecule topics.
7. Assignments to reinforce theoretical concepts.
8. Periodic quizzes for continuous assessment.
9. Problem-solving sessions for conceptual clarity.
10. Integration of real-life applications in medicine and nutrition.
11. Question–answer sessions to encourage critical thinking.

**Assessment Methods**

1. Mid-semester written examination.
2. End-semester written examination.
3. Class tests and quizzes.
4. Assignments / seminar presentations.
5. Attendance and participation.

**BIOTECHNOLOGY**  
**MDC45BTT102(T)25:Biomolecules**

Nature of Course	MDC-2				
Course Code	MDC45BTT102(T)25				
Course Title	BIOMOLECULES				
Course Level	Level 100				
Credit Details	Total Credit	Lecture/ Week (1hr of lecture)	Tutorial/ Week (1hr of tutorial)	Practical/W eek	Total Hours/ Week
	3	2 (30hrs/semester)	1 (15hrs per semester)		3 (30hrs lectures+15hrs tutorial per semester )
Course Audience	Semester I				
Proposed by (for Non Core courses)	Department of Biotechnology, Manipur University				
Pre Requisites (if any)	1. 2.				
Skill Training Required (if any)	1. 2.				
Pre-Requisite Course Required (if any)	1. 2.				
Faculty Eligibility and Specialization (if any)					

**Course Objective (Summary):**

The aim of the course is to provide students with basic understanding of biological molecules - carbohydrate, proteins, lipids and nucleic acids including their building blocks. Students will learn about the structure, function and biological significance of these biomolecules.

**Course Learning Outcomes:** Upon completion of the course the learners will be able to:

CO1	<b>Recall</b> the structure and properties of carbohydrates, proteins, lipids, nucleic acids etc and their building blocks.
CO2	<b>Describe</b> the structures and the chemical properties of the amino acids, carbohydrates, lipids and nucleic acids (RNA and DNA). Students will also be able to describe the four levels of protein structure and explain how protein structure is influenced by the amino acid sequence.
CO3	<b>Think critically</b> the significance of biological molecules in living systems and generate an interest to gain more knowledge in the field and apply the knowledge gained in their future studies.

### *Detailed Syllabus Content*

<b>Unit</b>	<b>Unit Name</b>	<b>Detailed Syllabus</b>	<b>Credit</b>
I	<b>Molecular building blocks</b>	Concept of intra- and intermolecular interaction (covalent bond, ionic bond, hydrogen bond, hydrophobic interaction, van der Waals interaction etc). Role of weak forces in biology. Carbohydrate: Structure, function and properties of monosaccharides and disaccharides. Lipids: Classification of lipids, structure and function of fatty acids, storage lipids, structural lipids. Amino acids: Classification, Structure, physical and chemical properties. Nucleic acids: Ribonucleic and deoxyribonucleic acids, purines and pyrimidines, nucleosides and nucleotides.	1
II	<b>Proteins and nucleic acids</b>	Proteins: classification of proteins on the basis of composition, conformation and function, different level of structural organization of proteins (primary, secondary, tertiary & quaternary), forces stabilizing protein structure and shape, physical and chemical properties. Nucleic acids: Watson and Crick model of DNA structure, forms of DNA, Types of RNA.	1
III	<b>Polysaccharides and membranes</b>	Storage and structural polysaccharides (glycogen, starch and cellulose). Biological significance of polysaccharides. Fluid mosaic model of membrane structure, Roles of lipids, proteins and carbohydrates in membrane structure and function.	1

#### **Suggested Readings**

- 1.
- 2

#### **Additional Readings:**

- 1.
- 2.

#### **Course Teaching-Learning Process**

- Class lectures
- Seminars
- Tutorials
- Group discussions and Workshops
- Short answer type questions
- Long answer type questions
- Objective type questions
- Multiple choice questions
- Statement, reasoning and explanation
- Quizzes
- Presentations through Posters and power point

## BOTANY

### MDC45BOT102(T)25: Plant Diversity and Utilization

**Credit: 3**

**Unit 1:**

**(12 Hours)**

**Plant diversity and its scope-** Genetic diversity, Species diversity, Plant diversity at the ecosystem level, Agrobiodiversity and cultivated plant taxa, wild taxa. Values and uses of Biodiversity: Ethical and aesthetic values, Precautionary principle, Methodologies for valuation, Uses of plants, Uses of microbes.

**Unit 2:**

**(13 Hours)**

**Loss of Biodiversity:** Loss of genetic diversity, Loss of species diversity, Loss of ecosystem diversity, Loss of agrobiodiversity, Projected scenario for biodiversity loss, Management of Plant Biodiversity: Organizations associated with biodiversity management Methodology for execution- IUCN, UNEP, UNESCO, WWF, NBPGR; Biodiversity legislation and conservations, Biodiversity information management and communication

**Unit 3:**

**(10 Hours)**

**Conservation of Biodiversity:** Conservation of genetic diversity, species diversity and ecosystem diversity, In situ and ex situ conservation, Social approaches to conservation, Biodiversity awareness programmes, Sustainable development.

**Unit 4:**

**(10 Hours)**

**Role of plants in relation to Human Welfare;** a) Importance of forestry their utilization and commercial aspects b) Avenue trees, c) Ornamental plants of India. d) Alcoholic beverages through ages. Fruits and nuts: Important fruit crops their commercial importance. Wood and its uses.

#### **Suggested Readings**

1. Krishnamurthy, K.V. (2018). An Advanced Text Book of Biodiversity - Principles and Practices. Oxford and IBH Publications Co. Pvt. Ltd. New Delhi

**CHEMISTRY**  
**MDC45CHM102(T)25:Chemistry in Everyday Life**

(30 classes of 1 hour each)

L	T	P	Credit
2	1	0	3

**I. Learning Objectives**

On completion of this course, the student will be able

- LO-1. To understand the use and applications 12 principles of Green Chemistry, greener solvents and use of renewable energy sources of sustainable chemistry. To define the importance of inorganic elements in vital systems. To understand the importance of minerals and essentially trace elements and beneficial elements of living system.
- LO-2. Understanding water's unique properties helps explain a lot about water's behavior. Student's working knowledge of water quality and characteristics of water sources. Students understand the terms: micelle, hard water, soft water, temporary hardness, and permanent hardness. Students acquire knowledge of the cleaning capacity of soap in hard and soft water. Based on the acquired skill, students will be able to classify the given water as hard water or soft water. Students acquire skills to perform the experiment in the real lab.
- LO-3. To get basic understanding of Food additives sugar substitutes, sweeteners, food colors, antioxidants, stabilizers, Biomaterial etc. used in food industry.
- LO-4. To get knowledge of classes of adhesives, their preparation and bonding mechanisms.

**II. Course Outcomes**

On Completion of this course, the student has been able to

- CO-1 To understand environmental impact and sustainability of chemical processes and products, through the use of green chemistry principle. To define the importance of inorganic elements in vital systems. Explain the importance of minerals and essentially trace elements and beneficial elements of living system.
- CO-2 To understand the general properties of water and develop awareness about water quality criteria and standards, Knowledge of basic concepts and techniques of soap and detergent industry and their relation to public health and environment.
- CO-3 It will help to Remember and identify the additives in food and their functions.
- CO-4 To understand and remembers the classes of adhesives, their preparation and bonding mechanisms.

**III. Course Content**

**UNIT – 1: Green and Sustainable Chemistry**

(10 Hrs)

- Green and Sustainable Chemistry**  
Twelve principle of green chemistry with their explanation and examples, Use and examples of sustainable chemistry based on the principles, Green solvents –Super critical fluid, SC CO<sub>2</sub> and water as solvent, Energy requirement for reactions-renewable sources of energy, Use of microwave and Ultrasonic energy.
- Bio inorganic Chemistry**  
Essential and trace elements and bioinorganic chemistry, periodic survey of essential and trace elements: biological importance and relative abundance of the elements, the cell and distribution of the elements in the cell, The role of metal ions in the life process with special reference metal-protein systems and metalloenzymes, Communication and Sensing Roles of Metal ions, The role of metal ions in the basic biological reactions, Biological functions of bio-metals.

**UNIT – 2:**

(10 HRS)

- Water chemistry**  
Physical and chemical properties of water, temporary and permanent hardness of water and its removal process, Drawbacks of Acidity, alkalinity and turbidity in water, C.O.D. and B.O.D., Chlorination of water.

2. **Soap and detergents**

Soaps - Types of soaps. Cleansing action of soaps. Synthetic detergents - Classification.

Detergent additives. Comparison between soaps and detergents, Classification of detergents Anionic detergents, Cationic detergents, Non - ionic detergents; Amphoteric detergents. Soaps, Alkyl Sulphate; Alkyl Sulphonates; Alkyl Aryl Sulphonates, Amide Sulphonates, Ecofriendly Detergents.

**UNIT – 3: Food chemistry**

(5 Hrs)

Food additives: Enhancers, sugar substitutes, sweeteners, food colors, antioxidants, acids and bases used in food.

Food chelating agents, emulsifiers, thickening agents, gel builders, stabilizers, common food toxicants, flavors, Biomaterial: Uses of bacteria, yeasts and moulds in food industry

**UNIT – 4: Introduction to Polymers & Adhesives**

(5 Hrs)

1. **Polymers**

Definition: Monomer, Polymer, Polymerization, Classification of Polymers

2. **Adhesives**

Types of Bonding, Classification of adhesive, Preparation of adhesive, Starch adhesive, Protein adhesive. Synthetic resin adhesive, Use of Adhesive.

**IV. Suggestive Readings**

1. Environmental Chemistry – II Edition by A.K. De
2. Environmental Science by Turk A., Turk, J. Wittes J.T. and Wittes, R.E. (1978)
3. Ecology & Environment by P.D. Sharma.
4. Environmental Science: An Introduction by G. T. Miller-1991
5. Ajay Kr. Gupta, Handbook on Soaps, Detergents & Acid Slurry, 3rd revised edition; NIIR Board publication. ISBN: 9789381039472
6. P. K. Chattopadhyay, Modern Technology of Soaps, Detergents & Toiletries (with Formulae & Project Profiles) 4th Revised Edition, NIIR Board publication; ISBN: 9789381039700
7. H. Panda, Herbal Soaps & Detergents Handbook, NIIR Board publication; ISBN: 9789381039007
8. V.K. Ahluwalia, Green Chemistry: Environmentally Benign Reactions, CRC, 2008.
9. Food Chemistry Meyer L.H., 2006 publication
10. Fundamentals of Polymers - Raw Materials to Finish Products, Niranjan Karak
11. Adhesive Technology and Formulations Handbook.

**ENVIRONMENTAL SCIENCE**  
**MDC45ENV102(T)25: Environment and Society**

**Credit: 03 Contact hours: 45 hr**

Nature of Course	<b>MDC</b>				
Course Code	<b>MDC45ENV102(T)25</b>				
Course Title	<b>ENVIRONMENT AND SOCIETY</b>				
Course Level	<b>Level 100</b>				
Credit Details	Total Credit	Lecture/Week	Tutorial/Week	Practical/Week	Total Hours/ Week
	3	3			3
Course Audience	Major students enrolled in the FYUGP in Environmental Science				
Proposed by (for Non Core courses)					
Pre Requisites (if any)					
Skill Training Required (if any)					
Pre-Requisite Course Required (if any)	10+2 in Science				
Faculty Eligibility and Specialization (if any)	MSc. Degree in Environmental Science with PhD or NET qualification				

**Course Objective (Summary):**The course is aimed to highlight the role of society in environmental conservation and management. The significant environmental events in the historical timeline of the country are highlighted to give a glimpse of the nation's conservation efforts.

**Course Learning Outcomes:**

1	Understand the human surrounding and the role of human being in shaping the surrounding.
2	Ability to understand the need to address current environmental issues.
3	Knowledge on the role of Indian traditions and culture in environment and its priorities.

**Detailed Syllabus Content:**

Unit	Unit Name	Detailed Syllabus	CH
I	Human beings and environment	Current environmental issues: pollution, biodiversity loss and climate change. Role of the society: interest groups, awareness and conservation. Rights and duties: the Constitutional provisions – Article 48A and Article 51A(g). Common Property Resources; the Tragedy of Commons.	12
II	Environmental movements	Bishnoi movement, Chipko movement, Appiko movement, Silent Valley movement, Narmada Bachao Andolan; Role of Environmental NGOs in India; Public Interest Litigations for environmental protection.	11
III	Gender and Environment	Sustainable development and Women; Ecofeminism- conceptual and theoretical perspectives; Feminist environmentalism; gender debates; Role of Manipuri women in conservation.	11
IV	Environmental issues in Northeast India	Modern agriculture and its impacts; Water scarcity; Forest loss; Wetland degradation; Sacred groves; Biodiversity and Wildlife issues; Pollution. Social unrest and environmentalism.	11

**Suggested Readings:**

- Pouloupoulos, S. G., and Inglezakis V.J., Eds. Environment and Development: Basic Principles, Human Activities, and Environmental Implications. Elsevier,2016.
- Harper, C. and Snowden M. Environment and society: Human perspectives on environmental issues. Routledge,2017.
- Barr, S. Environment and society: Sustainability, policy and the citizen. Routledge,2016.
- Agarwal, A. and Narain, S. eds. Dying Wisdom: Rise, fall and potential of India's traditional water harvesting systems. Centre for Science and Environment,1997.

**Cos/PSOs matrix:**

COs / PSOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
COs	X	X	X			X	X	X

**FOOD TECHNOLOGY**  
**MDC45BFT102(T)25: Fruits And Vegetables Processing Technology**

Nature of Course	MDC-2				
Course Code	MDC45BFT102(T)25				
Course Title	Fruits and Vegetables Processing Technology				
Course Level	Level 100				
Credit Details	Total Credit	Lecture/Week	Tutorial/Week	Practical/Week	Total Hours/ Week
	2	2hr./week			2hr./week 30hrs.lecture/Semester
Course Audience	Semester 1				
Proposed by (for Non Core courses)	No board of Studies				
Pre Requisites (if any)	1. 2.				
Skill Training Required (if any)	1. 2.				
Pre-Requisite Course Required (if any)	1. 2.				
Faculty Eligibility and Specialization (if any)					

**Course Objective (Summary):** This course explores the principles and practices of post-harvest handling, processing and preservation of fruit and vegetables to ensure quality, safety and marketability. Additionally students will gain practical skills of developing new products for value addition and innovative technologies for enhancing the shelf life of fruits and vegetables.

**Course Learning Outcomes:** Upon completion of the course the learners will be able to

1.	Understand various post-harvest handling techniques to minimize losses and maintain quality and to create insight to various preservation techniques of fruits and vegetables.
2.	Understand processing technologies for value addition and extending shelf life.
3.	Develop new products for value addition and innovative technologies for enhancing the shelf life of fruits and vegetables.
4.	
5.	

### Detailed Syllabus Content

Provide only the Unit-wise Credit: (Do not provide marks). Units and credits should be distributed uniformly to ensure balanced content and workload.

Unit	Unit Name	Detailed Syllabus	Credit
I	Introduction to fruits and vegetables processing; Methods of Preservation of Fruits and Vegetables	<ul style="list-style-type: none"> <li>• Current status of production and processing of fruits and vegetables.</li> <li>• Importance of post harvest technology.</li> <li>• Post harvest handling (Harvesting, Precooling, Sorting, Grading and Packaging.)</li> <li>• Factors influencing the quality and shelf life of fruits and vegetables.</li> <li>• Principles of Preservation.</li> <li>• Preservation methods such as preservation by high temperature, low temperature, Drying and dehydration, filtration, use of chemical preservatives, use of food additives (Sugar, Salt, acids and vinegar), oil Preservation , fermentation ,Carbonation, Antibiotics, irradiation etc.</li> </ul>	1
II	<b>Value addition of fruits and vegetables</b>	<ul style="list-style-type: none"> <li>• Processing of fruit pulp/puree.</li> <li>• Processing of sauce and ketchup.</li> <li>• Processing of pickles.</li> <li>• Processing of chutney.</li> <li>• Processing of fruit juices.</li> <li>• Fermented and non-fermented beverages.</li> <li>• Processing of Jam, jellies, marmalades, candy.</li> </ul>	1
III			
IV			

Note: Additional units may be added as required, ensuring alignment with total credit norms.

#### Suggested Readings

1. Fellows, P. (2016). Food Processing Technology: Principles and Practice (4th ed.). Woodhead Publishing.
2. Toldrá,F.(Ed.).(2016).Handbook of Fruits and Vegetable Flavors. Wiley-Blackwell.
3. Smith, G. C. (2019). Introduction to Food Process Engineering (2nd ed.). Springer.
4. Food science by B.Srilakshami. (2018)New Age International Publisher.
5. Fundamentals of Foods and Nutrition by R.Madambi & M.V. Rajgopal.

6. Foods: Facts and Principles by N.S. hakuntalamanay (2020) New Age International Publishers.

7. Preservation of Fruits and Vegetable by Girdhari lal and Sidappa (1998) CBS Publications

**Additional Readings:**

- 1.
- 2.

**Course Teaching-Learning Process**

The important relevant teaching and learning processes involved in this course are;

- Class lectures
- Seminars
- Tutorials
- Group discussions and Workshops
- Question framing
- Short answer type questions
- Long answer type questions
- Objective type questions
- Multiple choice questions
- Statement, reasoning and explanation
- Project-based learning
- Field-based learning
- Practical component and experiments
- Quizzes
- Presentations through Posters and power point
- Internship in industry and research institutional

**Linkage between Programme Learning Outcomes (POs) and Course Learning Outcomes (COs)**

	PO1	PO2	PO3	PO4	PO4	PO5	PO6		
CO1									
CO2									
CO3									
CO4									
CO5, etc.									

**Assessment Methods**

- Oral and written examinations
- Closed-book and open-book tests,
- Problem-solving exercises,
- Practical assignments and laboratory reports,
- Observation of practical skills,
- Individual and group project reports,
- Seminar and presentations,
- Interactive sessions.

## FRUITS AND VEGETABLES PROCESSING TECHNOLOGY (Practical)

Nature of Course	MDC-2				
Course Code	MDC45BFT102(P)25				
Course Title	Fruits and Vegetables Processing Technology				
Course Level	Level 100				
Credit Details	Total Credit	Lecture/ Week	Tutorial/ Week	Practical/Week	Total Hours/ Week
	1			1 (2hrs./week)	2hrs/week 30hrs practical per semester
Course Audience					
Associated Theory Courses (Topics)	1. 2. 3.				
Skill Training Required (if any)	1. 2.				
Pre-Requisite Course Required (if any)	1. 2.				
Faculty Eligibility and Specialization (if any)					

### Course Description (Summary):

This course offers technical knowledge and hands-on training for preserving and transforming fruits and vegetables.

**Course Learning Outcomes:** Upon completion of the course the learners will be able to

1.	Identify and handling different machinery equipments used in food processing unit.
2.	Prepare different types of beverages like RTS, nectar, squash and syrup.
3.	Prepare different methods of preservation by using sugar to achieve desired product.
4.	Explain how techniques like curing, fermenting and immersion in brine or vinegar prevent spoilage.
5.	

### Detailed Syllabus Content

*(Provide only number of sessions per practical activity)*

Sl. No.	List of Practicals	No. of Sessions
1.	Identification and handling of various machinery and equipments used in food processing units.	1
2.	Preparation of RTS, nectar, squashes and syrup.	2
3.	Preparation of jam, jellies, marmalade, fruit candies.	2
4.	Preparation of chutney and sauces / ketchup.	2
5.	Preparation of various types of pickles.	2

### Suggested Readings

1. Rahman, M.S. (2018). Postharvest Physiology and Biochemistry of Fruits and Vegetables. CRC Press.
2. Siddappa, G.S. and Tendon, G.L.(2009).Preservation of Fruits and Vegetables. ICAR, Publications, New Delhi.
3. Rehman, M.S.(2020).Handbook of Food Preservation.CRC Press

4. Vaclavic, V. A. and Christian, E.W., (2020). Essentials of Food Science, 4th Edition.  
Springer International Publishers, London.

5. Fruit and Vegetable Preservation by R.C Bhutani (2009), Biotech Books.

6. Food Science Experiments and Applications by M. Sethi. (2019) CBS Publishers &  
Distributor

***Additional Readings:***

- 1.
- 2.

**List of Essential Major Equipment**

- 1.
- 2.

**Major Laboratory Stores/Consumables Required**

- 1.
- 2.

**Essential Software (Licensed/Open-Source)**

- 1.
- 2.

**Student Activities**

- (i) Demonstration Notes/ Observation Notebooks:
- (ii) Practical Records / Project Reports :

**GEOGRAPHY**  
**MDC45GEG102 (T) 25: Geography of India**

Nature of Course	MDC				
Course Code	MDC45GEG102 (T) 25				
Course Title	Geography of India				
Course Level					
Credit Details	Total Credit	Lecture/ Week	Tutorial/ Week	Practical/ Week	Total Hours/ Week
	3	2	1	--	3
Course Audience	Students pursuing Second Semester				
Proposed by (for Non-Core Course if any)					
Pre Requisite (if any)					
Skill Training Required (if any)					
Pre Requisite Course Required (if any)					
Faculty Eligibility and Specialisation (if any)					

**Course Objective:**

1. Understanding the geographical features of India.
2. General overview on people and demographic dimensions of India.
3. General overview on economic dimensions of India.

**Course Learning Outcome:**

Upon completion of the course the learner will be able to:

1. Understand the physical aspects of India.
2. Understand the population dynamics of India.
3. Understand the economic dimensions of India.

**Detailed Syllabus Content**

Unit	Unit Name	Detailed Syllabus	Credit/Hour
I	Physical Setting	Location, Physiographic Divisions, Drainage, Climate, Soil, and Natural vegetation.	9 hrs
II	Population	Distribution, Density, Growth; Composition (Race, Caste, Religion, Language, and Tribes).	9 hrs
III	Mineral Resources	Metallic (Iron, Manganese, Copper, Bauxite, Lead, Zinc, Tungsten, Gold and Silver) and Non-Metallic (Mica, Limestone, Gypsum, Diamond and Atomic Minerals).	9 hrs
IV	Agriculture	Production and Distribution of Rice, Wheat, Maize, Millets, Cotton, Jute, Sugarcane, Tea, Coffee and Rubber.	9 hrs
V	Industry and Transport	Iron and Steel, Textiles, Automobile, Information Technology; Transport system (Railways, Roadways, Air Transport, Inland Waterways) and Major Ports.	9 hrs

**Suggested Readings:**

1. Chatterjee, Rupali (2018): Geography of India, 2<sup>nd</sup> Edition, Global Vision Publishers House, New Delhi.
2. Khullar, D.R. (2018): India – A Comprehensive Geography, Kalyani Publishers, Ludhiana.
3. Gautam, Alka (2015): Advanced Geography of India, Sharda Pustak Bhawan, Allahabad.
4. Saxena, Pallavi (2025): Majid Husain's Geography of India, Mc Graw Hill, New Delhi.
5. Sharma, T.C. (2013): Economic Geography of India, Rawat Publications, Jaipur.

6. Singh, Jagdish (2003): India – A Comprehensive & Systematic Geography, Gyanadaya Prakashan, Gorakhpur.
7. Singh, R.L. (ed.) (1971) India: A Regional Geography, National Geographical Society of India, Varanasi.
8. Tiwari R.C. (2019): Geography of India, Pravalika Publications, Allahabad.

**Additional Readings:**

1. Gopal Krishan (2017) The Vitality of India: A Regional Perspective, Rawat Publication, Jaipur.
2. Singh, Gopal (2010) Geography of India, Atma Ram and Sons.

**Course Teaching-Learning Process**

The important relevant teaching and learning processes involved in this course are –

- Class lectures
- Seminar
- Group discussion and workshop
- Question Framing
- Quizzes

Linkage between Programme Learning Outcome (POs) and Course Learning Outcome (COs)

L	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6
CO1	3	2	1	2	2	0
CO2	3	2	1	2	2	0
CO3	3	2	1	2	2	0

3: High, 2: Medium, 1: Low, 0: No Correlation

**Assessment Methods**

- Written examination
- Close-book and open-book test
- Problem solving exercise
- Individual and group project
- Seminar and presentation
- Interaction session

## GEOLOGY

### MDC45GEL102(T)25: Environmental Sanitation and Public Health

#### Course objectives:

The course enables students to acquire essential understanding of environmental sanitation and hygiene within the Swachh Bharat framework, facilitating them to comprehend sanitation challenges across urban, peri-urban and rural settings and their implications for public health.

#### Course Learning Outcomes:

After completion of the course, students will be able to:

1. Understand core concepts of sanitation, hygiene and public health.
2. Explain sanitation issues in urban, peri-urban and rural contexts.
3. Relate the objectives and strategies of the Swachh Bharat Mission to sanitation outcomes.
4. Identify basic sanitation practices and community – level interventions for health improvement.
5. Develop foundational skills for participation in environmental sanitation initiatives

#### Detailed Syllabus Content

Unit	Unit Name	Detailed Syllabus
I	Fundamentals of Environmental Sanitation and Public Health	Concept, scope and objectives of sanitation. Sanitation systems and services. Epidemiology and environmental health. Principles of environmental sanitation and disease prevention.
II	Community, Food and Housing Sanitation	Community sanitation measures: Sanitation of camps, festivals, schools, swimming pools. Food and milk sanitation: Hygienic preservation, pasteurization methods and plants. Housing sanitation: lighting, ventilation (natural and artificial), housing standards.
III	Solid Waste and Hazardous Waste Management	Solid waste: characteristics, collection, transport and disposal. Disposal methods: Landfill, composting, incineration. Hazardous wastes: classification, handling, storage and disposal. Safety considerations in waste management.
IV	Industrial Hygiene, Noise and Radiological Health	Industrial hygiene: Occupational hazards and control measures. Engineering and safety measures in industrial units. Noise pollution: Sources, effects, control strategies. Radiological health: Radioactive wastes and disposal.
V	Rural sanitation and Wastewater Management	Rural sanitation concepts and programmes. Sanitary latrines, community toilets, septic tanks, soak pits. Biogas plants. Advanced wastewater treatment and reuse.

#### Suggested Readings:

1. Salvato, J.A. (2000) Environmental Engineering and Sanitation, John Wiley and Sons.
2. Metcalf and Eddy (2005) Wastewater Engineering: Collection, Treatment and Disposal, McGraw-Hill.
3. Ehlers, V.M. and Steel, E.W. (1977) Municipal and Rural Sanitation, McGraw Hill.
4. Birdie, G.S. and Birdie, J.S. (1992) Water supply and sanitary engineering, Dhanpat Rai and Sons.
5. CPHEEO (1999) Manual on Sewage and Sewage Treatment, Govt. of India.

**PHYSICS**  
**MDC45PHY102(T)25:Introduction to Physics**

**Course Objective**

- To give an introduction to the fundamentals of Physics.
- To give introductory concepts on units and measurement, scalar and vectors, laws of motion, work, power and energy, electricity and magnetism, geometry and wave optics, gravity and planetary motion, wave and oscillation, and electronics.

**Course learning Outcomes**

- They will understand the basic concepts of units and measurements, motion, optics, electricity and magnetism, energy, waves and oscillation and the concept of electronics which are the fundamental parts of Physics and its application in everyday life.
- On successful completion of the course, students will be able to understand the preliminary idea of the concept of Physics and its phenomena in our daily lives.

**UNIT 1**

**Mechanics**

Physical quantities, Units of measurement, SI units, Scalars and Vectors, Speed and Velocity, Linear momentum and Acceleration. Laws of motion, friction and lubrication, uniform circular motion.

Work, energy, power; principle of conservation of energy.

Newton's law of gravitation, acceleration due to gravity.

**(15 Lectures)**

**UNIT 2**

**Heat and Thermodynamics**

Concept of heat and temperature, specific heat, Latent heat.

Laws of thermodynamics (zeroth, first and second), Heat transfer: conduction, convection and radiation.

**(5 Lectures)**

**UNIT 3**

**Waves and Optics**

Introduction to waves and its characteristics, Longitudinal and transverse waves, Simple harmonic motion, simple pendulum.

Dual nature of light, Reflection, refraction and total internal reflection (simple examples), Interference, diffraction, and polarization (Simple idea only)

Principle of optical fibers and LASER

**(8 Lectures)**

**UNIT 4**

**Electricity and Magnetism**

Electric charge, current, Coulomb's law. Electric field Intensity and Electric potential (simple idea). Capacitance and Capacitors.

Ohm's law, resistances and their combination. Kirchoff's laws.

Alternating currents, Electromagnetic induction, Faraday's laws and Lenz law. Applications to transformer, generator and motor (no derivation).

**(10 Lectures)**

## **UNIT 5**

### **Electronic and modern Physics**

Semiconductors, diodes and transistors, Solar cell, digital mobile data communication.  
Radioactivity, half life and mean life. Nuclear fission and fusion. (Elementary idea).

**(7 Lectures)**

#### **Reference Books:**

1. Elements of Properties of Matter, D.S. Mathur, 2008, S. Chand and Company Limited
2. Feynman Lectures, Vol. I, R.P.Feynman, R.B.Leighton, M.Sands, 2008, Pearson Education
3. Concept of Physics (I &II), H.C Verma.
4. NCERT Physics Textbooks (Class 9,10 11 &12)
5. Principles of Optics, B.K. Mathur, 1995, Gopal Printing.
6. Optics, Ajay Ghatak, 6th ed., 2017, Tata McGraw Hill.
7. Electricity and Magnetism, D.C.Tayal, 1993, Himalaya Publishing House.
8. Electricity and Magnetism, J H Fewkes & J Yarwood, Oxford University Press, Calcutta, 1985
9. SWAYAM/NPTEL modules on basic physics

**ZOOLOGY**  
**MDC45ZOO102(T)25**  
*(Introduction to Animal diversity-2)*

**Objective:**

The course is designed with an aim to provide scope and historical background of the animals specially the Chordates. The adequate explanation to the students regarding various mechanisms involved in thriving survival of the animals within their geographic realms and adaptations will create interest among students.

**Outcome:**

Upon completion of the course, the students will be unable to:

1. Understand different chordates
2. Study about diversity in animals making students understand about their distinguishing features.
3. Appreciate similarities and differences in life functions among various groups of animals.
4. Know about the habit and habitat of chordates in marine, fresh water and terrestrial ecosystems.

**Course Content:**

*Theory [Credits: 3] 45 hrs/ 100 marks (25 for Internal assessment, 5 for attendance & 70 for end Semester exam)*

**Unit 1: Introduction to Chordates, Protochordata**

**9 hrs**

General characteristics and classification of Chordates upto Classes; General characteristics of Hemichordata, Urochordata and Cephalochordata; Structure & Life Cycle of *Balanoglossus*.

**Unit 2: Origin of Vertebrates, Agnatha**

**9hrs**

Characters of Vertebrates, examples; Comparative account between Protochordates & Vertebrates; Distinctive features of Poikilothermic & Homeothermic Vertebrates. Structure & Life cycle of Agnatha / *Petromyzon*.

**Unit 3: Pisces , Amphibia**

**9 hrs**

General characteristics of Pisces, Classes with examples; Types of Scales, Fins; Parental care; Osmoregulation and Swim bladder in Fish. Amphibians: Class with examples; Distinctive characters of Apoda, Urodela & Anura; Parental care in Amphibians; Defensive mechanisms in Amphibians.

**Unit 4: Reptilia, Aves**

**9 hrs**

General characteristics , Classes with examples; External features of a *lizard*; Poison apparatus and biting mechanism in snakes; Difference between Venomous and non – venomous Snakes. General characteristics of Birds; Classes with examples, Types of feathers , types of Beaks; Flight mechanism & adaptations; Perching mechanism and migration in birds.

**Unit 5: Mammals (Prototheria, Metatheria & Eutheria)**

**9hrs**

General characters , Class with examples ; Distinctive characters of Prototheria, Metatheria and Eutheria; Adaptations in Toothless, Aquatic, Flying & Fossorial mammals; Types of Feet; Dentition in Mammals.

### ***Teaching and Learning Process:***

Information and concepts about morphology and anatomy of chordates will be imparted through classroom lectures to inculcate a conceptual base among the students about the subject and through observations in nature through real animals/preserved specimens/models. Hands-on exposure would be provided to the students leading to more comprehensive learning. Blended learning using chalk-n-talk method and e-learning using presentations, animations, simple animal modelsystems, etc. would be used to enhance their conceptual understanding. Inquiry-based collaborative learning environment through presentations, group discussions and round tables on the various aspects of chordate biology would be created to ensure effective learning and understanding of the concepts. Field-based project activities can be included to create interest among the students to study and explore the biology and behavior of chordates inculcating research aptitude. In addition, study of animals in their natural habitat will improve the observation skills, data collection skills, critical thinking and analytical skills of students. Furthermore, museology will give them a comprehensive idea of structural features of chordates and the basis of classification. Curriculum-related assignments would improve the reading, writing and abstracting skills and enhance the critical thinking of the students. After completion of each unit there should be a doubt clearing session/class in order to test whether the teaching imparted had been followed by the Students. Power point presentation on any topic of the Unit (both theory and practical syllabi) shall be compulsory for all the Students.

### ***Assessment Methods:***

Measures to be adopted for assessment are as follows.

**Class Tests:** Regular class tests will judge the grasp of the topics by the students.

**Projects and Assignments:** Individual/group projects will inculcate independent thinking as well as the team work skills among the students.

**Regular Presentations:** Presentations by the students on a particular topic will enhance student's learning and confidence. The presentations will be assessed based on the content, novelty, explanation and response to queries raised by peers.

**Viva-voce:** *Viva-voce* is another critical component of assessment of the practical component of a course. Inquiry-based learning blended with hands-on learning will develop critical thinking and competencies among students.

**Semester-end Examination:** Semester-end examination and grading of students based on their performance in the exams is an indicator of student's learning throughout the semester. A comparative assessment of students through final exams, analyses comprehensive knowledge gained by each student.

### ***Recommended Books:***

1. Young, J. Z. (2004). *The Life of Vertebrates*. III Edition, Oxford university press.
2. Parker T.J. and Haswell W.A. (1972). *Textbook of Zoology Vertebrates*. VII Edition, Volume II
3. Pough H. (2018). *Vertebrate life* X Edition, Pearson International.

### ***Online Tools and Web Resources:***

- <https://www.khanacademy.org/science/biology/crash-course-bio-ecology/crash-course-biology-science/v/crash-course-biology-123>
- <https://opentextbc.ca/biology2openstax/chapter/chordates>.

## COMPUTER SCIENCE (BCA)

### MDC45BCA102(T)25: Fundamentals of Internet Technologies

Nature of Course	<b>MDC – 2</b>				
Course Code	<b>MDC 2: MDC45BCA102(T)25</b>				
Course Title	<b>Fundamentals of Internet Technologies</b>				
Course Level	Level 100				
Credit Details	Total Credit	Lecture / Week	Tutorial/ Week	Practical/Week	Total Hours/ Week
	3	3	-	-	45(L)/Week
Course Audience	Students from non-computer science disciplines who require basic knowledge of <b>Internet technologies, online communication tools, and safe digital practices</b> for academic, personal, and professional use.				
Pre Requisites (if any)	NIL				
Skill Training Required (if any)	NIL				
Pre-Requisite Course Required (if any)	NIL				
Faculty Eligibility and Specialisation (if any)	PhD / M.Sc. / M.Tech. / MCA in Computer Science / IT with specialisation in Programming Languages / Software Development				

**Course Objective:** This course introduces the basic concepts of the **Internet and modern web technologies**. Students will learn how the Internet works, including basic networking concepts, Internet services, web browsers, search engines, and online communication tools. The course also focuses on responsible Internet usage, cybersecurity awareness, and the role of Internet technologies in modern society.

#### Course Learning Outcomes:

1.	Understand the basic concepts and working principles of the Internet.
2.	Identify common Internet services and communication tools.
3.	Explain the role of web browsers, search engines, and web resources.
4.	Apply safe, responsible practices when using the Internet.
5.	Recognise the role of Internet technologies in modern digital society and emerging technologies.

## Detailed Syllabus Content

Unit	Unit Name	Detailed Syllabus	Credit
I	Introduction to the Internet	Concept of Internet, history and evolution of the Internet, Internet architecture, Internet Service Providers (ISP), types of Internet connections (broadband, fibre, wireless, mobile data), applications of the Internet in daily life.	0.6
II	Internet Protocols and Communication	Basic networking concepts, TCP/IP overview, IP addressing, domain name system (DNS), introduction to common Internet protocols (HTTP, HTTPS, FTP, SMTP).	0.6
III	Web Browsers and Search Engines	Concept of web browsers, working of browsers, popular browsers (Chrome, Firefox, Edge), search engines, search techniques and keywords, downloading and uploading files, cookies and browser security basics.	0.6
IV	Internet Applications and Services	Email basics and email services, social networking platforms, video conferencing tools, online collaboration tools, cloud storage services, introduction to e-commerce and digital payment systems.	0.6
V	Internet Safety and Digital Responsibility	Cyber threats (malware, phishing, spam), password security, privacy protection, safe browsing practices, ethical use of Internet resources, digital citizenship and responsible online behaviour.	0.6

**Note:**

*Since 1 credit ≈ 15 hours of teaching time in a semester:*

- **3 credits → 45 total teaching hours**

- **5 units →  $45 \div 5 = 9$  hours per unit**

*In credit terms, that's:*

- **$3 \text{ credits} \div 5 \text{ units} = 0.6 \text{ credit per unit}$**

*So:*

- **Each unit = ~0.6 credit (9 hours)**

### **Suggested Readings:**

1. Douglas E. Comer – The Internet Book: Everything You Need to Know About Computer Networking and How the Internet Works.
2. Behrouz A. Forouzan – Data Communications and Networking, McGraw-Hill.

### **Additional Readings:**

1. Andrew S. Tanenbaum – Computer Networks, Pearson.
2. Kurose & Ross – Computer Networking: A Top-Down Approach, Pearson.

### **Course Teaching-Learning Process**

The important relevant teaching and learning processes involved in this course are;

- Class lectures and tutorials
- Demonstrations of Internet tools
- Group discussions and workshops
- Case study discussions
- Assignments and quizzes
- Project-based learning on Internet applications

### Linkage between Programme Learning Outcomes (POs) and Course Learning Outcomes (COs)

CLOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
CLO1	3	3	1	1	1	1	2	1	1
CLO2	3	3	2	1	1	1	2	1	1
CLO3	2	3	2	2	1	1	2	1	1
CLO4	2	2	2	2	2	3	3	3	2
CLO5	1	2	2	2	2	3	3	3	2

### Assessment Methods

- Oral and written examinations
- Closed-book and open-book tests
- Problem-solving exercises
- Assignments and reports
- Seminar and presentations
- Interactive sessions and discussions

## COMPUTER SCIENCE (CSC)

### MDC45CSC102(T)25: Fundamentals of Internet Technologies

Name of Course	MDC 2				
Course Code	MDC45CSC102(T)25				
Course Title	Fundamental of Internet Technologies				
Course Level	Level 100				
Credit Details	Total Credit	Lecture/Week	Tutorial/Week	Practical/Week	Total Hours
	3	3	0	0	45(L)
Course Audience	This course introduces students to the basic concepts of the Internet and related technologies. It provides an understanding of Internet architecture, web technologies, communication protocols, and common Internet services. The course is useful for students who wish to gain foundational knowledge of Internet usage, online communication, and web-based applications.				
Pre-Requisites (if any)	Basic knowledge of computers and general computer usage.				
Skill Training Required (if any)	NIL				
Pre-Requisite Course Required (if any)	NIL				
Faculty Eligibility and Specialization (if any)	PhD / M.Sc. / M.Tech. / MCA in Computer Science / IT with specialisation in Programming Languages / Software Development				

**Course Objective:** This course introduces the basic concepts of the Internet and modern web technologies. Students will learn how the Internet works, including basic networking concepts, Internet services, web browsers, search engines, and online communication tools. The course also focuses on responsible Internet usage, cyber security awareness, and the role of Internet technologies in modern society.

**Course Outcome:**

Code	Course Objective
CO1	Understand the basic concepts and working principles of the Internet.
CO2	Identify common Internet services and communication tools.
CO3	Explain the role of web browsers, search engines, and web resources.
CO4	Apply safe, responsible practices when using the Internet.
CO5	Recognise the role of Internet technologies in modern digital society and emerging technologies.

## Detailed Syllabus Content

Unit	Unit Name	Detailed Syllabus	Credits
I	Introduction to the Internet	Introduction to the Internet Concept of Internet, history and evolution of the Internet, Internet architecture, Internet Service Providers (ISP), types of Internet connections (broadband, fibre, wireless, mobile data), applications of the Internet in daily life.	0.6
II	Internet Protocols and Communication	Basic networking concepts, TCP/IP overview, IP addressing, domain name system (DNS), introduction to common Internet protocols (HTTP, HTTPS, FTP, SMTP).	0.6
III	Web Browsers and Search Engines	Concept of web browsers, working of browsers, popular browsers (Chrome, Firefox, Edge), search engines, search techniques and keywords, downloading and uploading files, cookies and browser security basics.	0.6
IV	Internet Applications and Services	Email basics and email services, social networking platforms, video conferencing tools, online collaboration tools, cloud storage services, introduction to e-commerce and digital payment systems.	0.6
V	Internet Safety and Digital Responsibility	Cyber threats (malware, phishing, spam), password security, privacy protection, safe browsing practices, ethical use of Internet resources, digital citizenship and responsible online behaviour.	0.6

**Note:** Since *1 credit*  $\approx$  *15 hours* of teaching time in a semester:

- *3 credits*  $\rightarrow$  *45 total teaching hours*
- *5 units*  $\rightarrow$  *45  $\div$  5 = 9 hours per unit*

In credit terms, that's:

- *3 credits  $\div$  5 units = 0.6 credit per unit*

So:

- *Each unit = ~0.6 credit (9 hours)*
- 

### Suggested Reading:

1. Programming the World Wide Web, Robert W. Sebesta, Pearson Education, 4th Edition
2. Web Technologies TCP/IP Architecture, and Java Programming, Achyut S. Godbole and AtulKahate, The McGraw Hill Companies, Second Edition.
3. Internet and Web Technologies, Raj Kamal, TMH
4. Web Technology & Design, Xavier C., New Age Publication

**Course Teaching–Learning Process:** The important relevant teaching and learning processes involved in this course are:

1. Interactive lectures explaining Internet concepts and technologies.
2. Demonstrations of Internet tools, browsers, and web services.
3. Use of diagrams, presentations, and videos for visual understanding.

## MATHEMATICS

### MDC45MAT102(T)25 : Elementary Mathematics-I

<b>Nature of Course</b>	<b>MDC</b>			
<b>Course Code</b>	<b>MDC45MAT102(T)25</b>			
<b>Course Title</b>	<b>Elementary Mathematics-I</b>			
<b>Course level</b>	<b>100</b>			
<b>Credit details</b>	<b>Total Credit</b>	<b>Lecture/Week</b>	<b>Tutorial/week</b>	<b>Total Hour/Week</b>
	3	3	0	3
<b>Course Audience</b>	<b>BA/BSc Second Semester</b>			
<b>Proposed by</b>	<b>Board of Under-Graduate of Department of Mathematics, Manipur University</b>			
<b>Pre Requisites</b>	<b>Concept of numbers, counting, equations</b>			
<b>Pre Requisite Course Required</b>	<b>10 Mathematics</b>			
<b>Faculty Eligibility and Specialization</b>	<b>Not Required</b>			

**Course Objectives:** The course is aimed at imparting concepts frequently used in Mathematics at a primary level and also required in other disciplines. It aims at giving basic knowledge of the subject to students from any background which is often required for a student preparing for various competitive examinations.

**Course learning outcomes:** After completion of the course, a student will be able to

1.	define and identify various types of sets, understand various set operations like union, intersection, difference, and complement to sets, and use Venn diagrams to visualize these operations.
2.	understand the concepts of relations and functions, visualize various special functions graphically, and identify the domain and range of functions, particularly trigonometric functions.
3.	use PMI to prove mathematical statements and theorems, understand and apply the fundamental principle of counting, and solve problems involving the arrangement (permutations) and selection (combinations) of objects.
4.	understand the basic algebra of complex numbers, including calculating the modulus and conjugates, represent complex numbers graphically, find solutions to quadratic equations, including the calculation of square roots for complex numbers.
5.	identify and negate of statements, and understand the construction of compound statements using logical connectors like "Or" and "And", interpret logical implications ("If then", "Only if", "If and only if") and use quantifiers ("there exists", "for all"), construct truth tables to determine the validity and equivalence of statements, including the converse and contrapositive, apply principles of mathematical reasoning to validate statements and arguments.

## Detailed Syllabus Content

Unit	Unit Name	Detailed Syllabus	L	T	P	Total
I	Sets	Introduction with historical notes, Sets and their representations, Finite and Infinite sets, Equal sets, Subsets, power sets, Universal sets, Venn diagram, Operations on set, Union, Intersection, Difference of sets, Complement of sets, Practical problems on union and intersection	9	-	-	9
II	Relation, function	Introduction, Cartesian product, Relations, Functions, Graphs of some special functions, graphical representation of linear inequalities in one and two variables and their solutions, trigonometric functions, domain and range of such functions	9	-	-	9
III	Principle of Mathematical Induction, Permutation, Combination	Introduction of PMI, Motivation, PMI, Fundamental Principle of Counting, Permutations, Combinations	9	-	-	9
IV	Complex numbers and quadratic equations	Introduction, Algebra of complex numbers, the Modulus and the Conjugates of a Complex number, Argand plane and Polar Representation, Quadratic equations, Square roots	9	-	-	9
V	Mathematical reasoning	Introduction, Statements, Negation of a statement, Compound statement, Special words "Or", "And", Implications If then, Only if, If and only if, Quantifiers, there exists, for all, truth table, equivalence of statements, Converse, Contrapositive, validating statements	9	-	-	9

### Suggested Readings:

NCERT Mathematics Text Book for Standard XI

### Additional Readings:

**B S Vatsa**, *Discrete Mathematics*, 3<sup>rd</sup> Edition, Vishwa Prakashan

### Course Teaching-Learning Process

The important relevant teaching and learning processes involved in this course are:

- Class lectures
- Seminars
- Tutorials
- Group discussions and Workshops
- Short answer type questions
- Long answer type questions
- Objective type questions
- Multiple choice questions
- Statement, reasoning and explanation

### Linkage between Programme Outcomes (POs) and Course Learning Outcomes (COs)

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9
CO1		√	√				√		
CO2		√	√	√					
CO3		√	√	√		√			
CO4		√	√				√		

#### Assessment methods

- Oral and written examination
- Closed book and open book tests
- Problem solving exercises
- Seminar and presentations
- Interactive sessions

**STATISTICS**  
**MDC45STA102(T)25: Introduction to Statistics II**

Nature of Course	Multidisciplinary course (MDC)				
Course Code	MDC45STA102(T)25				
Course Title	Introduction to Statistics II				
Course Level	Level 100				
Credit Details	Total Credit	Lecture/ Week	Tutorial/ Week	Practical/ Week	Total Hours/ Week
	3	3 lectures per week (1hr. per lecture)	1 tutorial class (1hr.) per week		4hrs.

**Course Objective (Summary):** The course is designed to make the student understand essential insights into a data set and understand how much the values in a data set differ from each other and the central tendency etc.

**Learning Outcomes:**

This course is designed for students' other than statistics discipline and can be opted as choice based credit system (CBCS). This course will make the students conversant with

- (a) Various summary measures of dispersion, moments, skewness and kurtosis.
- (b) Simple and rank correlation, Partial and Multiple correlation coefficients.
- (c) Measures of association for 2x2 and rxs contingency tables.
- (d) Have knowledge on attributes and Chi-square.

**Detailed Syllabus Content**

**Unit I**

**1 Credit (15 classes)**

Moments

- Raw moments for grouped and ungrouped data.
- Moments about arbitrary constant for grouped and ungrouped data.
- Central moments for grouped and ungrouped data, Effect of change of origin and Scale, Sheppard's correction for moments upto fourth order (without proof).
- Relations between central moments and raw moments (upto fourth order).
- Karl Pearson's  $\beta$  and  $\nu$  coefficients

**Unit II**

**1 Credit (15 classes)**

Skewness and Kurtosis

- Concept of skewness of frequency distribution, positive, negative skewness, symmetric frequency distribution.
- Bowley's coefficient of skewness.
- Karl Pearson's coefficient of skewness
- Measures of skewness based on moments
- Concepts of kurtosis, leptokurtic and platykurtic frequency distributions.
- Measures of kurtosis based on moments

**Unit III**

**1 Credit (15 classes)**

Bivariate data: Definition, scatter diagram, simple correlation, rank correlation. Trivariate Data: Partial and Multiple correlation coefficients. Fitting of linear and quadratic regression using principle of least squares. Theory of attributes and consistency of data, independence and association of attributes, measures of association and contingency for 2 x 2 and r x s contingency tables,  $\chi^2$  -test for independence of attributes (2 x 2 contingency table).

**Recommended Books:**

1. Gun,A.M.,Gupta,M.K.and Dasgupta,B.(2013).Fundamental of Statistics, Voll World Press, Kolkata.
2. Gun,A.M.,Gupta,M.K.and Dasgupta,B.(2011).Fundamental of Statistics, Vol II, World Press,Kolkata.
3. Hanagal, D. D. (2009). Introduction to Applied Statistics: A Non-Calculus Based Approach. Narosa Publishing Comp. New Delhi.

## LIBRARY & INFORMATION SCIENCE

### MDC45LIS102(T)25: Electronic Resources Management

**Course Objectives:** To familiarize students with concepts, types, and management of electronic resources, emphasizing selection, evaluation, licensing, access, and preservation of e-resources for efficient collection development and library service delivery.

#### Unit I: Fundamentals of Electronic Resources Management

- Concept and Definition: Meaning, scope, and importance of electronic resources in modern libraries.
- Types of Electronic Resources: E-journals, e-books, databases, e-theses, e-newspapers, and multimedia resources.
- Collection Development: Selection criteria, evaluation methods, and acquisition models.
- Access Models: Subscription, consortia, open access, and hybrid models.
- Licensing and Copyright: License terms, user rights, negotiation of agreements, and copyright compliance.

#### Unit II: Evaluation, Standards, and Management Challenges

- Evaluation of E-Resources: Tools, techniques, and usage statistics.
- Standards and Protocols: Metadata standards (Dublin Core, MARC21), interoperability, and link resolvers (Open URL).
- Challenges in Management: Cost, access control, archiving, and digital preservation issues.
- Digital Rights Management (DRM): Concepts, tools, and implications for libraries.
- Consortia and Networking: INFLIBNET, DELNET, and national/international library consortia.

#### Unit III: Tools, Technologies, and Future Trends

- E-Resource Management Systems (ERMS): Overview, features, and examples (Ex Libris Alma, Koha ERM, EBSCO ERM).
- Discovery Services: Functionality and integration (Primo, Summon, Vu Find, EDS).
- Access and Authentication: IP authentication, proxy servers, remote access tools, and SSO.
- Usage Analysis and Decision-Making: Evaluating usage data for renewal and cancellation decisions.
- Preservation and Archiving: LOCKSS, CLOCKSS, and Portico initiatives.
- Future Trends: AI in resource management, cloud-based ERM, and integration with Open Access and institutional repositories.

#### Recommended Readings List

1. Johnson, P. (2018). *Fundamentals of Collection Development and Management*. ALA Editions.
2. Varnum, K. J. (Ed.). (2014). *The Top Technologies Every Librarian Needs to Know*. ALA TechSource.
3. Hazen, D. C., Horrell, J. L., & Merrill-Oldham, J. (1998). *Selecting Research Collections for Digitization*. CLIR.
4. Shukla, P. (2019). *Electronic Resource Management in Libraries*. Ess Ess Publications.

5. Sharma, R. N. (Ed.). (2017). *Digital Resources and Library Management*. Atlantic Publishers.
6. INFLIBNET Centre. (2024). *E-ShodhSindhu: Consortium for Higher Education Electronic Resources*.
7. Lihitkar, S. R. (2020). *E-Resource Management in Academic Libraries*. LAP Lambert Academic Publishing.
8. Tenopir, C., & King, D. W. (2000). *Towards Electronic Journals: Realities for Scientists, Librarians, and Publishers*. SLA Publishing.

**Course Learning Outcomes:** Students will be able to identify, evaluate, organize, and manage electronic resources effectively, handle licensing and access models, and apply digital tools and standards for acquisition, maintenance, and user support in libraries.

**MASS COMMUNICATION**  
**MDC45MCC102(T)25: Media and AI**

Nature of Course	<b>MDC-2</b>				
Course Code	MDC45MCC102(T)25				
Course Title	<b>Media and AI</b>				
Course Level	Level 100				
Credit Details	Total Credit	Lecture/Week	Tutorial/Week	Practical/Week	Total Hours/Week
	3	3	1		4
Course Audience					
Proposed by (for Non Core courses)	<b>Department of Mass Communication, Manipur University</b>				

**Course Objectives:**

This course explores the dynamic intersection of media and artificial intelligence (AI). Students will examine how AI technologies such as, machine learning, generative models, and automation are reshaping journalism, advertising, entertainment, and social media.

**Course Learning Outcomes:**

After completing the course students will be able to:

1.	Understand the fundamentals of AI.
2.	Explore the Generative AI.
3.	Master the application of AI in media.
4.	Understand the ethical usage of AI.
5.	Imply the AI tools in the entertainment industry.

**Detailed Syllabus**

Unit	Unit Name	Detailed Syllabus	Contact Hours
I	<b>Introduction to AI</b>	Introduction to Artificial Intelligence; Development of AI; Kinds of AI: Predictive AI, Generative AI and Agentic AI; Understanding Generative AI: The layers, Machine Learning and Deep Learning.	9
II	<b>Generative AI</b>	Generative AI: Understanding LLMs and Prompt Engineering; Crafting Powerful Prompts; Generative AI Tools and Applications; Chat GPT; Perplexity AI; Notebook LM; Google Pinpoint.	9
III	<b>AI and Media</b>	AI Tools for News Gathering; AI-Assisted News Delivery; AI-Generated Content Creation; Automated Content	

	<b>Production</b>	Generation: Video, Sound and Multimedia.	9
IV	<b>AI and Ethics</b>	Responsible Use of AI: AI Ethics and Risk Management; Deepfakes; Black Box; AI Hallucination; AI and Fact-Checking; Exploration of AI-based Fact-checking Tools and Algorithms.	9
V	<b>Future of AI in Entertainment</b>	AI and the Future of Entertainment; AI in Marketing and Social Media; Challenges of AI in Journalism.	9
<b>Total</b>			<b>45</b>

### Suggested Readings

1. AI Assisted Journalism: Practical Applications and Ethical Considerations, Chad Gephardt (Author), Chris Post (Editor). (Independent Publisher)
2. Artificial Intelligence in Modern Journalism: A Comprehensive Guide for Digital Age Journalists, Muddam Narasimha Swamy (Author) (Independent Publisher).
3. Exploring the Intersection of Artificial Intelligence and Journalism:
4. The Emergence of a New Journalistic Paradigm. Santosh Kumar Biswal, Anand J. Kulkarni. (Author). Routledge India
5. AI Scribe: Automating Journalistic Reporting Tools [Print Replica] Kindle Edition. Robert Breeser (Author)
6. Automating the News – How Algorithms Are Rewriting the Media. Nicholas Diakopoulos (Author) Harvard University Press.
7. Artificial Intelligence in Journalism: Changing the News. Tony Silvia (Author). McFarland Publishing.
8. The Handbook of Artificial Intelligence and Journalism. Aynur Sarisakaloğlu (Editor), Martin Löffelholz (Editor). Wiley.
9. Reporting on artificial intelligence: a handbook for journalism educators, Jaakkola, Maarit [editor]. UNESCO series on journalism education.
10. Emotional AI: The Rise of Empathic Media. McStay, A. Sage.

### Articles and Reports:

1. JournalismAI (2023). AI in the Newsroom Report. London School of Economics.
2. UNESCO (2022). Guidelines on the Ethics of Artificial Intelligence.
3. MIT Technology Review and Nieman Lab reports on AI in media.

**COMMERCE**  
**MDC45COM102(T)25 : Start-Up Venture Management**

Nature of Course	MDC - 2				
Course Code	MDC45COM102(T)25				
Course Title	START-UP VENTURE MANAGEMENT				
Course Level	-				
Credit Details	Total Credit	Lecture/Week	Tutorial/Week	Practical/Week	Total Hours/Week
	3	2	1		3
Course Audience	Students of other Departments				
Faculty Eligibility and Specialization (if any)	Commerce Faculty				

**Course Objectives:**

- To develop entrepreneurial and start-up management skills.
- To understand the process of starting and managing a new venture.
- To equip students with knowledge of funding, marketing, and legal frameworks for start-ups.

**Course Learning Outcomes:** Upon completion of the course, the learners will be able to

<b>1</b>	Identify viable business opportunities.
<b>2</b>	Prepare a basic business plan.
<b>3</b>	Understand legal and financial aspects of starting a venture.
<b>4</b>	Analyze marketing and growth strategies.

**Course Content:**

**UNIT I: Introduction to Entrepreneurship and Start-Ups(20 Marks)**

Meaning of entrepreneurship and start-up, Evolution of entrepreneurship in India, Difference between entrepreneur, manager and intrapreneur, Characteristics of successful entrepreneurs, Types of Entrepreneurs and Start-Ups - Innovative, imitative and social entrepreneurs, Scalable start-ups and small business start-ups, Role of government in promoting start-ups – Start-up India initiative, Role of incubators, accelerators and MSMEs.

**UNIT II: Business Idea Generation and Opportunity Analysis(20 Marks)**

Idea Generation – Sources of business ideas, Techniques of idea generation (brainstorming, design thinking), Innovation and creativity in start-ups. Opportunity Evaluation – Feasibility analysis (technical, market, financial), SWOT analysis, Environmental scanning (basic concepts only) Preparation of Business Plan - Structure of business plan.

**UNIT III: Legal Framework and Registration of Start-Ups (20 Marks)**

Forms of Business Organization – Sole Proprietorship, Partnership, Limited Liability Partnership (LLP), Private Limited Company, One Person Company (OPC). Legal and Regulatory Requirements – Registration procedures, Licensing and permits, Intellectual Property Rights (IPR), GST (Concept only). Government Support and Policies – Start-Up India Scheme, MSME registration, Mudra Loans and other financial assistance schemes.

#### **UNIT IV: Financing and Managing Start-Up Operations(20 Marks)**

Sources of Finance – Bootstrapping, Angel investors, Venture capital, Bank loans, Crowd funding. Financial Planning - Estimation of capital requirements and Working capital management. Managing Start-Up Operations - Location and layout decisions, Human resource planning, Supply chain basics, Technology adoption.

#### **UNIT V: Marketing and Growth Strategies (20 Marks)**

Marketing Strategies for Start-Ups – Market segmentation and targeting, Digital marketing (Concept only), Branding and Product positioning. Growth Strategies – Scaling up operations, Franchising, Strategic alliances and partnerships.

#### **Suggested Text Book:**

Poornima M. Charantimath, "Entrepreneurship Development and Small Business Enterprises", Pearson Education.

#### **Other Suggested Reference Books:**

Prasain, G.P., "Entrepreneurship Development", Sunmarg Publishers and Distributors, New Delhi. Prasain, G.P., "Entrepreneurship and Small Scale Industries", Akansha Publishing Home, New Delhi. Nandan, H., "Fundamentals of Entrepreneurship", PHI Learning, Delhi. Madhu, S., Swapna, H.R., Sheetal Hukkeri and Vishal Srivastava, "Entrepreneurshi and Starts-Ups", Himalaya Publishing House, New Delhi. Sharma, Sangeeta, "Entrepreneurship Development", PHI Learning, Delhi.

## MANAGEMENT

**Paper Title: Communication and Personality Development**

**Paper Code: MDC45BBA102(T)25**

**Maximum Marks: 100**

**Contact Hours: Minimum 45**

**End Semester Exam.: 70**

**Internal Assessment: 30**

**Credit: 3**

**Course Outcomes (CO)/Learning Outcomes:**

- CO1 Recognize the various elements of communication, channels of communication and barriers to effective communication
- CO2 Express themselves effectively in routine and special real world business interactions
- CO3 Demonstrate appropriate use of body language, critical and innovative thinking
- CO4 Display competence in oral, written, and visual communication
- CO5 Take part in professional meetings, group discussions, telephonic calls, elementary interviews and public speaking activities
- CO6 Appraise the pros and cons of sample recorded verbal communications in a business context
- CO7 Create and deliver effective business presentations using appropriate technology tools, for common business situations

### **Course Contents**

#### **Unit-1 (.75 Credit):**

**Understanding and Improving Organizational Communication:** Meaning of Communication; Models for Diagnosis; Alternative Perspectives on Organizational Communication; And, Barriers to Communication.

#### **Unit-2 (.75 Credit):**

**Organization and Communication:** Organization Theory and Communication; Structural Issues that affect Communication; Communication within basic organization structures; Ethical Norms; Communication Networks; And, External Communication.

#### **Unit-3 (.75 Credit):**

**Introduction to Personality Development, Person-to-Person Communication & Intrapersonal Communication:** Definition & Basics of Personality; Listening skills; The Symbolic Process; Dimensions and Functions of Nonverbal Communication; Impact of Culture on Nonverbal Communication; Intrapersonal Processes and Communication; Interpersonal Communication.

#### **Unit-4 (.75 Credit):**

**Communication in Groups & Personality Development:** The Development of a Group; Team Building; Group Decision making; Conflict management; Time Management; Introduction to Leadership; Types of Leadership, and Leadership development. Application of Communication & Personality Development: Business Letters & Report Writing; The art of effective presentation; Causes and management of stress at work; Developing mindfulness and self-confidence; Developing a positive attitude; Intrapersonal and interpersonal skills; Techniques for effective personality development.

**Suggested Readings:**

1. Fisher, Dalmer. (2007). *Communication in Organizations*. Jaico Publishing House, Mumbai
2. Monippaly, M Matthukutty. (2001). *Business Communication Strategies*. Tata McGraw Hill Publishing Company Ltd., New Delhi
3. Lesikar R. V. & J.D. Pettitt. Jr. (1996). *Business Communication; Theory and Application*. Homewood III, Richard D. Irwin
4. Bowman J.P & Branchaw B.P. (1987). *Business Communication from Process to Product*. Dryden Press, Chicago
5. Murphy, Herta A and Peck, C.E. (1997). *Effective Business Communication*. New Delhi, Tata McGraw Hill
6. Mohan, Krishna. (2020). *Business Correspondence & Report Writing*. Tata McGraw Hill Publishing Company Limited, New Delhi.
7. G.T. Hunt. (1980). *Communication Skills in the Organisation*. Prentice Hall of International, London.
8. Shurter, Robert. (2008). *Effective letters in Business*. Tata McGraw Hill Publishing Company Limited, New Delhi.
9. Larry L. Barker, (1981). *Communication*. Prentice Hall of India, New Delhi.

**Course Objective:**

**Learning Outcomes:**

1. The students will gain the fundamental knowledge of Yoga.
2. The study will give the importance of different scopes of yoga in life.
3. The theoretical and practical approaches will be learned.

**Course Contents**

**Unit – I: Introduction**

- 1.1 Meaning and Definition of Yoga
- 1.2 Aims and Objectives of Yoga
- 1.3 Yoga in Early Upanisads
- 1.4 The Yoga Sutra: General Consideration
- 1.5 Need and Importance of Yoga in Physical Education and Sports.

**Unit - II: Foundation of Yoga**

- 2.1 The Astanga Yoga: Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana and Samadhi.
- 2.2 Yoga in the Bhagavadgita - Karma Yoga, Raja Yoga, Jnana Yoga and Bhakti Yoga
- 2.3 Preparation for yoga practice.

**Unit – III: Asanas**

- 1.1 Meaning and definitions of asanas
- 1.2 Classification of asanas and their applications
- 1.3 Effect and importance of asanas on various body system
- 1.4 Planning for practicing yoga asanas.

**Unit – IV: Pranayama and Kriya**

- 4.1 Meaning and definition of pranayama
- 4.2 Types and importance of pranayama
- 4.3 Meaning and definition of kriya
- 4.4 Types and importance of kriyas.
- 4.5 Meditation

**Unit –V: Education and Yoga**

- 5.1 Definitions of yoga education
- 5.2 Importance of yoga education
- 5.3 Difference between yogic practices and physical exercises
- 5.4 Yoga education centers in India and abroad
- 5.5 Competitions of Yogasanas.

**References:**

1. Brown, F. Y.(2000). How to use yoga. Delhi:Sports Publication.
2. Gharote, M. L. &Ganguly, H. (1988). Teaching methods for yogic practices. Lonawala: Kaixydahmoe
3. Rajjan, S. M. (1985). Yoga strenthening of relaxation for sports man. New Delhi:Allied Publishers.
4. Shankar,G.(1998). Holistic approach of yoga. New Delhi:Aditya Publishers. Shekar,K. C. (2003). Yoga for health. Delhi: Khel Sahitya Kendra.

## BENGALI

Name of Course : MDC (Multidisciplinary Course)

Course Code : MDC45BEN102(T)25

Course Title : Bangla Folk Drama and Theatre

(বাংলা লোকনাট্য ও নাট্যধারা)

Course Level : 100

Credits : 3

Contact Hours : 45 hrs. (15hrs x 3)

### Course learning outcome :

Students will gain an understanding of the rich tradition of Bengali folk drama and its performance practices. The course introduces the characteristics, forms, and social functions of folk theatre, including Jatra and street theatre. It will help learners appreciate indigenous performance traditions and their role in community life, cultural expression, and contemporary theatre practices. The course will also develop awareness of preservation and adaptation of folk performance in modern media.

### UNIT-I

**লোকনাট্যের ধারণা ও বৈশিষ্ট্য** — লোকনাট্যের সংজ্ঞা, বৈশিষ্ট্য ও সামাজিক ভূমিকা; দলগত অভিনয় ও একক অভিনয়; কথকতা ও মৌখিক উপস্থাপনার ধারা; লোকনাট্য ও সম্প্রদায়জীবনের সম্পর্ক।

### UNIT-II

**বাংলা লোকনাট্যের রূপভেদ** — আলকাপ, গস্তীরা, ঘাঁটা প্রভৃতি লোকনাট্যের রূপ; আঞ্চলিক বৈচিত্র্য; সংগীত, নৃত্য ও অভিনয়ের সমন্বয়; লোকনাট্যে হাস্যরস ও ব্যঙ্গের ভূমিকা।

### UNIT-III

**যাত্রাপালা ও আধুনিক প্রেক্ষিত** — বাংলা যাত্রাপালার ঐতিহ্য ও গঠন; থিয়েটার ও পথনাটকের বিকাশ; সামাজিক সচেতনতা ও রাজনৈতিক বার্তায় লোকনাট্যের ব্যবহার; আধুনিক মঞ্চে লোকরূপের অভিযোজন।

### UNIT-IV

**সংরক্ষণ, রূপান্তর ও সমকালীন প্রাসঙ্গিকতা** — লোকনাট্যের সংরক্ষণ ও নথিভুক্তিকরণ; গণমাধ্যম, টেলিভিশন ও ডিজিটাল মাধ্যমে লোকনাট্য; শিক্ষা ও সাংস্কৃতিক আন্দোলনে লোকনাট্যের ভূমিকা; লোকঐতিহ্যের ভবিষ্যৎ সম্ভাবনা।

### সহায়ক গ্রন্থাবলী

১. লোকনাট্য — ধরুব দাস, প্রতিভাস, কলকাতা
২. ভারতীয় লোকনাট্য — উষা প্রসন্ন মুখোপাধ্যায়, সাক্ষর প্রকাশন, কলকাতা
৩. লোকসংস্কৃতি — হরেকৃষ্ণ মুখোপাধ্যায়, পুস্তক বিপণি
৪. বাংলা যাত্রাপালা — অদ্রীশ বর্ধন
৫. Folk Theatre of India — Kapila Vatsyayan

## **DEFENCE STUDIES**

### **MDC45DSS102(T)25:DRUG TRAFFICKING AND POPPY CULTIVATION**

**Learning Outcome** – After undergoing this course, a student will be in a position to –

- Understand the concept, history, and impact of drug trafficking and poppy cultivation.
- develop critical thinking abilities to analyse the causes, effects, and responses to drug trafficking and poppy cultivation.
- understand the ethical dilemmas and global implications of drug trafficking, fostering a sense of social responsibility.

#### **CONTENTS**

##### **UNIT 1. Drug Trafficking**

- a) Meaning and Definition
- b) Evolution of drug trafficking.
- c) Drug Trafficking & Organised Crime
- d) Case Studies: Manipur & Mizoram

##### **UNIT 2. Geographical Hotspot: Golden Triangle and Golden Crescent**

- a) Overview of Golden Triangle
- b) Overview of Golden Crescent
- c) Geopolitical Factors and Influences

##### **UNIT 3. Drug Trafficking: Impact and Responses**

- a) Effects on Societal and Political Implications
- b) Law Enforcement and Security Cooperation
- c) Threat to Internal Security (Manipur & Mizoram)
- d) Governmental Preventive Measures

##### **UNIT 4. Poppy Cultivation**

- a) Overview of Poppy Cultivation in Manipur
- b) Emerging trends and linkages
- c) Ethnic politics

##### **UNIT 5. Consequences and Response**

- a) Threat to Internal geopolitics
- b) Impact on Economy and Environment
- c) Governmental Preventive Measures

#### **SUGGESTED READINGS**

- a. Ko-lin Chin (2009) The Golden Triangle: Inside Southeast Asia's Drug Trade, Cornell University Press
- b. Dr. Surya Narain Yadav (2009) Terrorism, Drug-Trafficking and Organised Crime: Challenges for International Peace and Security, Jnanada Prakashan, New Delhi
- c. C.K. Gandhirajan, (2004) Organised Crime, APH Publishing Corporation New Delhi
- d. Magazine, Journal, Article, Newspaper

## **ECONOMICS**

### **MDC45ECO102(T)25: Money and Banking**

#### **Course Description**

This course exposes students to the theory and functioning of the monetary and financial sectors of the economy. It highlights the organization, structure and role of financial markets and institutions. It also discusses interest rates, monetary management and instruments of monetary control. Financial and banking sector reforms and monetary policy with special reference to India are also covered.

#### **Learning outcome**

The students would have learned about the theory and functioning of the monetary and financial sectors of the economy.

Specifically, they would have learned the organization, structure and role of financial markets and institutions.

They will also learn concepts like interest rates, monetary management and instruments of monetary control.

Financial and banking sector reforms and monetary policy with special reference to India will also be taught.

#### **Course Outline**

##### **Money – Concepts and Theories:**

Concept, functions, and measurement of money, Theories of money supply determination, Role of money in the economy.

##### **Financial Institutions, Markets, and Innovations:**

Role and structure of financial markets and institutions; Financial crises — causes and consequences; Financial derivatives and financial innovations.

##### **Money and Capital Markets in India:**

Organization and structure of money and capital markets in India; Major reforms and regulatory changes; Role of markets in economic development.

##### **Interest Rates and Theories:**

Determination of interest rates; Sources of interest rate differentials; Theories of term structure of interest rates; Interest rate trends and policies in India.

##### **Banking and Monetary Policy:**

Banking system: balance sheet and portfolio management; Indian banking structure: evolution, reforms, and changing role; Central banking: functions and balance sheet; Monetary policy: goals, targets, indicators, and instruments; Monetary management in an open economy and current monetary policy of India

#### **Readings:**

- F. S. Mishkin and S. G. Eakins, *Financial Markets and Institutions*, Pearson Education, 6<sup>th</sup> edition, 2009.
- F. J. Fabozzi, F. Modigliani, F. J. Jones, M. G. Ferri, *Foundations of Financial Markets and Institutions*, Pearson Education, 3rd edition, 2009.
- L. M. Bhole and J. Mahukud, *Financial Institutions and Markets*, Tata McGraw Hill, 5<sup>th</sup> edition, 2011.
- M. Y. Khan, *Indian Financial System*, Tata McGraw Hill, 7th edition, 2011.
- Various latest issues of R.B.I. Bulletins, Annual Reports, Reports on Currency and Finance and Reports of the Working Group, IMF Staff Papers.

**EDUCATION**  
(Theory and Practical)

Nature of Course	Multi-Disciplinary Course - II				
Course Code	MDC45EDN102(T)26 and MDC45EDN102(P)26				
Course Title	<b>AI TRENDS IN MODERN EDUCATION (THEORY &amp; PRACTICAL)</b>				
Course Level	Level 100				
Credit Details	Total Credit	Lecture/Week	Tutorial/Week	Practical/Week	Total Hours
	3	2	-	1	30 (L)+30(P) hrs
Course Audience	<p>This Multidisciplinary Course (MDC-II) is designed for undergraduate learners from diverse disciplines—including Education, Arts, Science, Commerce, Social Sciences, and professional programmes—who seek foundational knowledge and practical skills in Artificial Intelligence for academic and professional contexts. It is suitable for students with no prior technical background who wish to understand the meaning and scope of AI, distinguish between Artificial Intelligence, Machine Learning, and Generative AI, and explore the role of AI in teaching, learning, and assessment within the Indian educational landscape. The course is particularly beneficial for pre-service teachers, aspiring educators, researchers, content creators, and students interested in educational technology, as it develops competencies in prompt engineering for lesson planning, classroom activities, assessment design, and feedback generation. Learners will also gain critical awareness of ethical issues such as bias, data privacy, plagiarism, and responsible AI use, while engaging in hands-on practical work to design AI-assisted lessons or assessments. Overall, the course is intended for students who aim to integrate AI tools effectively,</p>				
Proposed by	<b>Department of Education, School of Education, Manipur University</b>				
Associated Theory Courses	<ol style="list-style-type: none"> <li>1. <b>Foundations of Educational Technology</b> The course aligns with constructivist principles by encouraging learners to actively construct knowledge through hands-on prompt design, experimentation with AI tools, reflection, and project-based learning, where understanding emerges from interaction, problem-solving, and iterative refinement rather than passive consumption.</li> <li>2. <b>Cognitive Apprenticeship Theory</b> The structured progression from basic AI concepts to advanced prompt engineering and real-world projects reflects cognitive apprenticeship, where learners observe, practice, receive feedback, and gradually gain autonomy in complex skills such as AI-assisted teaching, assessment design, and ethical decision-making.</li> </ol>				
Faculty Eligibility and Specialization (if any)	Master's Degree in Education (Specialized in Educational Technology) Master's Degree in Information Technology or Prompt Engineering				

**Course Rationale**

This course introduces undergraduate learners to Artificial Intelligence in Education (AIED) with a strong skills orientation. It focuses on prompt engineering as a foundational digital skill for effective use of AI tools in teaching, learning, assessment, content creation, and academic research, aligned with NEP 2020 and employability needs.

## Course Objectives

After completing the course, learners will be able to:

CO1. Understand basic concepts of AI and Generative AI in education. CO2.

Design effective prompts for educational tasks.

CO3. Use AI tools ethically for teaching, learning, and assessment. CO4.

Create AI-assisted educational content and learning materials.

## Learning Outcomes (Level 100 – Skill-based)

Learners will demonstrate the ability to:

LO1. Write clear, structured, and task-specific prompts.

LO2. Generate lesson plans, quizzes, rubrics, and learning resources using AI. LO3. Evaluate AI-generated outputs for accuracy, bias, and relevance.

LO4. Apply academic integrity and ethical guidelines while using AI tools.

## Course Structure

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### UNIT I: FOUNDATIONS OF AI IN EDUCATION

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Meaning and scope of Artificial Intelligence AI vs

Machine Learning vs Generative AI

Role of AI in teaching, learning, and assessment Opportunities and challenges of AI in Indian education

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### UNIT II: INTRODUCTION TO PROMPT ENGINEERING

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Meaning and importance of prompts

Types of prompts (Instructional prompts, Question-based prompts, Role-based prompts and Output-format prompts)

Characteristics of an effective prompt Common prompt errors and limitations

---

### UNIT III: PROMPT ENGINEERING FOR TEACHING TASKS

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Designing prompts for -Lesson planning, Teaching-learning objectives, Classroom activities and Bloom's Taxonomy-based questions

Prompting AI for inclusive and learner-centered teaching

Differentiated instruction using AI prompts

---

### UNIT IV: PROMPT ENGINEERING FOR ASSESSMENT & EVALUATION

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Creating prompts for - MCQs, short-answer, and essay questions

Creating prompts for Rubric construction, Formative and summative assessment Creating prompts for Feedback generation

Academic integrity and plagiarism concerns

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### UNIT V: ETHICS AND RESPONSIBLE USE OF AI

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Ethical issues in AI uses

Data privacy and learner safety Bias and hallucination in AI outputs

Responsible prompt design for education

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## SUGGESTED PRACTICAL ACTIVITIES

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The practical lists given below is for indicative practice. Students should be encouraged to do more practice and activities. Emphasis should be given to assess student's ability to demonstrate the practical wisdom of performing guidance and counselling. The list are as follows and students should record **2 out of 15 practical** in their notebook:

1. Design a mini project on prompt engineering basics by creating a portfolio of instructional, question-based, role-based, and output-format prompts for one school subject.
2. Undertake a project to analyze effective and ineffective prompts, comparing AI outputs and documenting improvements made through prompt refinement.
3. Prepare a lesson-planning project using AI, where at least two lesson plans are generated through prompts and pedagogically reviewed.
4. Develop a project on learning outcomes generation, using AI prompts aligned with Bloom's Taxonomy for a selected unit.
5. Design a classroom activity bank using AI prompts, focusing on learner engagement and active learning strategies.
6. Prepare a project on inclusive and learner-centered teaching, demonstrating how AI prompts can support diverse learners.
7. Develop an assessment design project using AI to generate MCQs, short-answer, and essay questions for a selected topic.
8. Prepare a rubric development project, where analytic rubrics are created using AI prompts and evaluated for reliability and clarity.
9. Design a formative assessment project, showing how AI-generated activities can support continuous assessment.
10. Create a feedback generation project, using AI prompts to generate constructive feedback for sample student responses.
11. Prepare a comparative project on AI-based vs traditional assessment design, highlighting advantages and limitations.
12. Conduct a project on academic integrity in AI use, analyzing plagiarism risks in AI-generated content and proposing safeguards.
13. Undertake a bias and hallucination analysis project, identifying errors in AI-generated educational outputs and suggesting corrective prompt strategies.
14. Prepare a project on ethical issues in AI usage, focusing on fairness, transparency, and accountability in education.
15. Design a responsible prompt design handbook for teachers, including ethical guidelines and best practices.

### SUGGESTED RESOURCES LINKS:

1. Swayam Central Courses on AI in Education
2. NCERT YouTube Link on Empowering Teachers with AI
3. Corbeil and Corbeil (2025). Teaching and Learning in the age of Generative AI. Routledge.
4. Lydia Evelyn. (2025). Making ChatGPT work for You. Apress.
5. Guy Hart Davis. (2023). Killer ChatGPT Prompts. Wiley
6. Jens Belner. (2023). Mastering ChatGPT. TJ. Books

## ENGLISH

**Nature of Course:** MDC (Multidisciplinary Course)

**Course Code:** MDC45ENG102(T)25

**Course Title:** Fantasy and Science Fiction

**Course Level:** 100

Credit Details	Total Credit	Lecture/Week	Tutorial/Week	Total Hours/Week
	3	3		3

### Course Objectives

This course will introduce learners to the conventions, evolution, and key themes of both fantasy and science fiction. It will help to understand the distinctive features and types of fantasy and science fiction. It will foster the critical mindset to analyse texts and short stories pertaining to both genres. It will also help learners to understand the techniques the authors use to construct coherent and alternative realities through science and fantasy.

### Course Learning Outcome

After the completion of this course, the learners will be able to analyze, interpret and evaluate key works, themes and sub-genres in science fiction and fantasy fiction. The learners will gain a deeper understanding of fiction and fantasy, and will also learn the history of the genre. The learners will be able to understand themes, tropes and modes of expression. Students will also be able to develop skills to connect these narratives to scientific, social, cultural, and historical contexts while improving their critical thinking and research abilities.

### Detailed Syllabus Content

- UNIT I** Introduction: Definition, Genesis and Evolution of Fantasy and Sci-Fi  
Key Concepts: Alien, Time Travel, Artificial Intelligence, Extra-Terrestrial, Parallel Universe, Teleportation, Apocalypse, Virtual Reality, Fantasy, Wizardry, Urban Fantasy, Sword and Sorcery, Cyberpunk, Dystopian/Utopian
- UNIT II** H. G. Wells: *The Time Machine*  
Ray Bradbury: "The Fog Horn"
- UNIT III** Rick Riordan: *Percy Jackson and the Olympians: The Lightning Thief* (Book One)  
Angela Carter: "The Snow Child"

### Suggested Readings

- ❖ Attebery, Brian. *Strategies of Fantasy*. Indiana University Press, 1992.
- ❖ Booker, M. Keith. *Dystopian Literature: A Theory and Research Guide*. Greenwood Press, 1994.
- ❖ Freedman, Carl. *Critical Theory and Science Fiction*. Wesleyan University Press, 2000.
- ❖ Haraway, Donna. "A Cyborg Manifesto." In *Simians, Cyborgs and Women: The Reinvention of Nature*, Routledge, 1991.
- ❖ James, Edward, and Farah Mendlesohn, eds. *The Cambridge Companion to Fantasy Literature*. Cambridge University Press, 2012.
- ❖ Jameson, Fredric. *Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions*. Verso Books, 2007.
- ❖ Mendlesohn, Farah. *Rhetorics of Fantasy*. Wesleyan University Press, 2008.
- ❖ Roberts, Adam. *Science Fiction: The new Critical Idiom*. 2nd ed., Routledge, 2005.

**FASHION DESIGNING**  
**MDC45BFD102(T)25: Clothing Care and Maintenance**

<b>Nature of Course</b>	<b>Multidisciplinary Course–2</b>		
<b>Course Code</b>	MDC45BFD102(T)25		
<b>Course Title</b>	<b>Clothing Care and Maintenance</b>		
<b>Course Level</b>	---		
<b>Credit Details</b>	<b>Lectures (Hrs.)</b>	<b>Tutorial (Hrs.)</b>	<b>Total Credit (Hrs.)</b>
	<b>2 (33)</b>	<b>1 (15)</b>	<b>3 (48)</b>

**Course Objectives**

*The course aims to*

- ❖ Aim to extend the lifespan of garments, pre-serve their appearance, and ensure hygiene and comfort.
- ❖ Describe the role of water, soaps and detergents.
- ❖ Include sorting, washing, the procedure of removing different stain, drying, ironing/pressing and understanding care labels.
- ❖ Implementing strategies to prolong garment life, improve hygiene etc.

**Learning Outcomes**

*After learning the module, learners will be able to*

- ❖ Learn aspect related to care and maintenance of clothing.
- ❖ Understand washing methods for different types of clothing.
- ❖ Different between soaps and detergents
- ❖ Gain knowledge about stain removal and care of expensive cloth etc.

**Total hrs.: 48**

**End Semester Marks: 70**  
**Internal Assessment Mark: 30**  
**Total Marks: 100, Credit: 3**

**Unit 1**

**12 hrs.**

**Introduction to clothing care and maintenance**

- 1.1 Importance of clothing care in daily life, types of care and maintenance.
- 1.2 Factors affecting clothing life: fabric type, use, environment, and care methods.
- 1.3 Types of Water: hard and soft water, methods of softening water, role of water in cleaning.

**Unit 2**

**12 hrs.**

**Laundry Soaps**

- 2.1 Laundry soaps: composition of soap and types of soap
- 2.2 Different between soaps and detergents
- 2.3 Manufacturing process of soap and detergent

**Unit 3****12 hrs.****Laundering, Cleaning, Finishing & Stain Removal**

- 3.1 Laundry equipment and reagent, Dry cleaning: Benefits, difference between dry cleaning and laundry, care to be taken before washing, washing methods: hand wash, machine wash, eco-friendly washing..
- 3.2 Finishing: Importance of finishing in clothing care, stiffening agents- starch (cold water and hot water), other stiffening agents, preparation of starch, laundry blues.
- 3.3 Stain removal: Techniques of stain removal, various solvents for stain removing blood, tea, rust, oil/grease, etc.

**Unit 4****12 hrs.****Ironing, Labels & Special Care for Textiles**

- 4.1 Drying equipment, Iron box: function of an electric iron box, automatic iron box and steam iron, ironing board
- 4.2 Care labeling: washing instruction, bleaching instruction, drying instruction, ironing instruction etc. placement of labels on garment.
- 4.3 Care of embroidered, beaded, and sequined garments. Maintenance of traditional, ethnic, and ceremonial wear. Sustainable practices in garment care.

***Suggested Readings:***

1. Dantiyagi S (1996) Fundamentals of Textile and their care (5<sup>th</sup> Edition). Oriental Longmans.
2. Davis (1995) Laundry and Clothing Care. Drama Book Publisher.
3. Neomi (1998) Fabric care. New Age International Publisher.
4. Parthiban M & Srikrishnan MR. (2020) Apparel Finishing and Clothing Care. WPI.
5. Rajkrishore Nayak & Saminathan Ratnapandian (2018) Care and Maintenance of Textile Products Including Apparel and Protective Clothing. (1<sup>st</sup> Edition) CRC Press.

**Linkage between Programme Specific Learning Outcomes (PSOs) and Course Learning Outcomes (COs)**

	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO 1		✓				✓
CO 2		✓	✓			✓
CO 3	✓	✓		✓		✓
CO 4		✓				✓
CO 5						

## FINE ARTS

PAPER CODE: MDC45BFA102(P)25

CREDIT -3

### **UNDERSTANDING OF PAINTING, SCULPTURE, APPLIED ART, PRINT MAKING**

**Objectives:** The paper provides students with a holistic and integrated understanding of Fine Arts by giving knowledge and methods from multiple academic disciplines of Fine Arts. The approach encourages critical thinking, creativity and problem-solving by allowing the learners to explore connections between diverse fields of Fine Arts. It bridges the gaps between traditionally separate fields, promoting collaboration and innovation in addressing real-world challenges.

#### **Contents:**

- Visual arts in culture and society
- Creativity and communication
- Visual metaphor
- Experiments and expressions with diverse fields of visual art

**Course Learning Outcome:** By the end of this course, students will be able to identify and apply the basic elements and principles of visual art in both analysis and creation. They will develop an understanding of various artistic media, techniques, and historical movements, enabling them to recognize key styles and contributions of major artists. Students will also enhance their ability to interpret and critique visual artworks thoughtfully, and express personal ideas creatively through their own art-making processes.

बी.ए (हिंदी)  
द्वितीय सत्र  
सामान्य हिंदी लेखन

- इकाई 1.** सामान्य हिंदी का अर्थ एवं विशेषताएँ  
**इकाई 2.** सामान्य हिंदी का व्यावहारिक पक्ष  
**इकाई 3.** सामान्य हिंदी का कार्यालयी अनुप्रयोग  
**इकाई 4.** हिंदी संप्रेषण एवं सामान्य हिंदी  
**इकाई 5.** रचनात्मक लेखन एवं सामान्य हिंदी

संदर्भ ग्रंथ :

1. सामान्य हिंदी, सुशील कुमार, प्रयाग पुस्तक सदन, इलाहाबाद
2. सामान्य हिंदी, पृथ्वीनाथ पाण्डेय, कावेरी प्रकाशन, इलाहाबाद
3. सामान्य हिंदी, वासुदेव नंदन प्रसाद, भारती भवन, पटना
4. अच्छी हिंदी कैसे बोले, लिखे- भोलानाथ तिवारी, लिपि प्रकाशन, दिल्ली।

## HISTORY

Nature of Course	MDC				
Course Code	MDC45HIS102(T)25				
Course Title	<b>INTRODUCTION TO HISTORY OF MANIPUR</b>				
Course Level	Level 100				
Credit Details	Total Credit	Lecture/Week	Tutorial/ Week	Practical/Week	Total Hours/Week
	3	2	1		3
Course Audience	For 2 <sup>nd</sup> Semester students pursuing FYUP				
Proposed by (for Non Core courses)	Department of History and Department of Ancient History & Archaeology & Undergraduate Board of Studies History Manipur University.				
Pre Requisites (if any)	1. 2.				
Skill Training Required (if any)	1. 2.				
Pre-Requisite Course Required (if any)	1. 2.				
Faculty Eligibility and Specialization (if any)					

### Course Objective (Summary):

This course attempts to provide a brief introduction to the history of Manipur, formerly a small kingdom sandwiched between India and Southeast Asia. Because of its strategic location, Manipur has been a meeting ground of Indic and Sinic cultures, which is manifested in the lived experiences of its people. The variety of ethnic groups, languages, and religions reflects the multicultural character of the state—a fine example of unity in diversity. As the Government of India has vigorously pursued the ‘Act East Policy’ over the last few years, it has become imperative for learners to have a fair understanding of Manipur, its people, their history, and their culture.

**Course Learning Outcomes:** Upon completion of the course the learners will be able to

1.	Understand the meaning of history and its relation to other social sciences and historical writing.
2.	Learn about the land, its people and culture.
3.	Understand the multicultural character of the Manipur.
4.	Learn about the richness of Vedic culture.
5.	Appreciate and inculcate the idea of unity in diversity

### Detailed Syllabus Content

#### Introduction to History of Manipur

Unit	Unit Name	Detailed Syllabus	Credit/Hours
I	What is History	What is History? Importance of History; Relation with other Social Sciences; Sources of Manipur History: Archaeological and Literary Sources.	10 hrs.
II	Land and people	Land and People: Manipur-Geographical setting and historical ecology	8 hrs.
III	Pre and Proto History	Pre and Proto History: Palaeolithic, Mesolithic, Neolithic, Megalithic and Chalcolithic Phases.	9 hrs.
IV	Chiefdoms	Chiefdoms: Principalities and their domains	8 hrs.
V	Emergence of Kingdom	Emergence of Manipur kingdom – a brief account from the reign of Nongda Lairen Pakhangba to Khagemba (1 <sup>st</sup> century CE to 17 <sup>th</sup> century CE)	10 hrs.

*Note: Additional units may be added as required, ensuring alignment with total credit norms.*

### ***Suggested Readings***

1. John C.B. Webster: Studying History, Primus Books, 2019
2. Kamei, Gangmumei: History of Manipur – Pre-colonial Period, Akansha Publishing House, 2015
3. Jhalajit Singh, R.K.: A Short History of Manipur, Imphal, 2023
4. Singh, N. Joykumar: Emergence of Manipur as a Nation State, Akansha Publishing House, 2015
5. Singh, Ch. Manihar: History of Manipuri Literature, Sahitya Akademi, 2003

### **Course Teaching-Learning Process**

The important relevant teaching and learning processes involved in this course are;

- Class lectures
- Tutorials
- Short answer type questions
- Long answer type questions
- Objective type questions
- Multiple choice questions
- Quizzes

### **Linkage between Programme Learning Outcomes (POs) and Course Learning Outcomes (COs)**

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	CLO1	CLO2	CLO3
CO1										
CO2										
CO3										
CO4										
CO5, etc.										

### **Assessment Methods**

- Oral and written examinations
- Problem-solving exercises,
- Seminar and presentations,
- Interactive sessions.

## HOME SCIENCE

(Credit-3)

**Contact Hour – 45 Hrs.**

<i>Nature of Course</i>	MDC– 2				
<i>Course Code</i>	MDC45HSC102(T)25				
<i>Course Title</i>	<b>Women And Development</b>				
<i>Course Level</i>	Level-100				
<i>Credit Details</i>	Total Credit	Lecture/Week	Tutorial/Week	Practical/Week	Total Hours/Week
	3	3			3

**Course Objectives:** This course provides an understanding of the key concepts and dimensions of women and development. It examines gender roles, inequality, the status of women, and indicators such as HDI and GDI. The course explores historical and theoretical perspectives, including women's movements and major feminist approaches, and reviews policy frameworks and institutional mechanisms for women's development. It also analyses women's participation in the economy, workplace challenges, and economic empowerment initiatives. Finally, it addresses social dimensions such as education, health, violence against women, legal protections, and the role of awareness and support systems in promoting women's empowerment.

### **Course Outcomes**

After successful completion of the course, the student will be able to:

1. Explain the key concepts of women and development, gender roles, inequality, and indicators such as HDI and GDI.
2. Analyse historical and theoretical perspectives of women's movements and major feminist approaches at national and global levels.
3. Examine constitutional provisions, policies, programmes, and institutional mechanisms supporting women's development.
4. Evaluate women's participation in the economy, including labour force involvement, wage gaps, workplace challenges, and empowerment initiatives.
5. Assess the social dimensions of women's development, including education, health, violence against women, legal safeguards, and the role of awareness in promoting empowerment.

**Unit I: Conceptual Framework of Women and Development:** Concept of development, Meaning and scope of women and development, Gender roles and gender socialisation, Gender inequality and discrimination, Status of women in society, Indicators of women's development, Human Development Index (HDI) and Gender Development Index (GDI).

**Unit II: Historical and Theoretical Perspectives:** Women's movement in India, Women's movements at global level- Liberal feminism, Ecofeminism, Radical feminism and Intersectionality, Critique of traditional development theories from a gender perspective.

**Unit III: Policy framework and Institutional Mechanisms:** Directive Principles of State policy, Special Provisions for women, National policies and Programmes for women's Development, Role of government agencies, NGOs, and International Organisations in promoting women's Development.

**Unit IV: Women in Economy and Work:** Women’s Participation in the labour force, Women in formal and informal sector, unpaid work, care economy, Gender wage gap and employment discrimination at workplace, Challenges faced by working women, Women's entrepreneurship, skill development, self- help groups, and economic empowerment initiatives.

**Unit V: Social Dimensions of Women’s Development:** Women and Education- Assess, enrolment and equality, Women and Health- Reproductive Health, Maternal Health, Nutrition and mental well- being. Violence against women- Domestic violence, Sexual violence, Trafficking and Cyber violence. Legal measures for women's protection, Role of Education, Awareness and social support system in promoting women empowerment.

**References:**

1. Desai, Neera & Thakkar, Usha (2001). Women in Indian Society. National Book Trust, New Delhi.
2. International Labour Organization (ILO). Global Wage Report, Women at Work Report.
3. Kabeer, Naila (2011). Women’s Economic Empowerment and Inclusive Growth. IDRC.
4. Kapoor, Promilla (2000). Empowering the Indian Women. Publications Division, Govt. of India.
5. Krishnaraj, Maithreyi & Deshpande, Ashwini (2010). Gender Dimensions of Economic Reforms in India. Oxford University Press.
6. Kumar, Radha (1993). The History of Doing: An Illustrated Account of Movements for Women’s Rights in India. Zubaan.
7. National Sample Survey Office (NSSO). Reports on female labour force participation.

**CO–PSO Mapping Matrix**

CO / PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	✓	✓			✓
CO2	✓	✓			✓
CO3	✓		✓		✓
CO4	✓	✓	✓	✓	
CO5	✓	✓	✓		✓

## LAW (HUMAN RIGHTS)

### MDC45HRT102(T)25: Introduction to Human Rights

CREDIT 3

#### Course Objective:

This Course proposes to provide instruction on theoretical, conceptual, historical and other general aspects of human rights. It encompasses philosophical and historical foundations, concept of right, theories of rights and classification of rights.

#### Course content:

##### Unit I: Concept of Rights

- i) Meaning and Definition of Rights
- ii) Nature of Rights
- iii) Evolution of Rights.

##### Unit II: Theories of Rights

- i) Natural Theory of Rights
- ii) Legal/Positivists Theory of Rights
- iii) Social welfare Theory of Rights Unit

##### III: Generations of Rights.

- iv) First Generation of Rights
- v) Second Generation Of Rights
- vi) Third Generation Of Rights

#### Course Learning Outcome:

After completion of this course, students will understand the theoretical, conceptual, historical, philosophical aspects, as well as the applied aspects of Human Rights. They will also learn the relationships between rights and duties.

#### Suggested Readings

11. Agrawala, S.K., "Human Rights: Some Problems of Developing Countries", in Giradot and others, eds., New Directions in International Law (Frankfurt, 1982).
12. Bhagwati, P.N., Dimensions of Human Rights (Madurai: Society for Community Organization Trust, 1987).
13. Gupta, Sanjay, "Human Rights: Conceptual Controversies and the Crisis of Promotion", in M.P.Dube and Neeta Bora, eds., Perspectives on Human Rights (New Delhi: Anamika Publisher, 2000).
14. Iyer, V.R. Krishna, Human Rights and Inhuman Wrongs (New Delhi: D.K. Publishers, 1996).
15. Kazmi, Farid, Human Rights: Myth and Reality (New Delhi: Intellectual Publishers, 1987).
16. Merchant, A.K., "Human Rights: A Historical and Developmental Perspectives", in A.P.Vijapur and Kumar Suresh, eds., Perspectives on Human Rights (New Delhi: Manak Publishers, 1999).
17. Raphael, D.D., ed., Political Theory and the Rights of Man (London: Macmillian, 1967).
18. Saksena, K.P., ed., Human Rights: Fifty Years of India's Independence (New Delhi: Gyan Publishing House, 1999).
19. Salby, David, Human Rights (Cambridge University Press, 1987).
20. Sanajaoba, N., Human Rights in the New Millennium (New Delhi: Manas Publications, 2000)

# LINGUISTICS

## MDC45LIN102(T)25: Language planning, Policy and Documentation

(Credit 3, Marks 100)

### Learning Outcomes

1. By the end of this course, students will be able to:
2. Define and describe key concepts related to language planning, language policy, and language documentation
3. Explain the relationship between language, society, culture, and governance in multilingual contexts.
4. Identify major language policies at national and international levels, especially in the Indian context.
5. Apply basic methods of language documentation through simple data collection and analysis.
6. Analyze the role of language planning and documentation in language maintenance, shift, and revitalization.
7. Recognize ethical and social issues involved in language policy and documentation.

### 7.1 Language, Society, and Planning

Language and society: basic relationship; Multilingualism and linguistic diversity; What is language planning?; Status and Corpus planning; Goals and agents of language planning; Language, power, identity, and social inclusion; Role of language planning in education and public life  
(Contact Hours: 15)

### 7.2 Language Policy in National and Global Contexts

Meaning and scope of language policy; Language policy vs. language planning; Language policy in India: Constitutional provisions, Eighth Schedule of the Indian Constitution, Language policy in education; Language policies in multilingual nations; Role of government, institutions, and communities; Language rights and linguistic justice (Contact Hours: 15)

### 7.3 Introduction to Language Documentation

What is language documentation?; Importance of documenting endangered and minority languages; Difference between language description and documentation; Types of linguistic data: Word lists, Texts and narratives, Audio and video recordings; Basic steps in language documentation: Data collection, Transcription and translation (introductory), Archiving and preservation; Ethical issues in language documentation; Role of documentation in language maintenance and revitalization (Contact Hours: 15)

### Reading List

- Spolsky, B. (2004). *Language policy*. Cambridge University Press.
- Cooper, R. L. (1989). *Language planning and social change*. Cambridge University Press.
- Crystal, D. (2000). *Language death*. Cambridge University Press.
- Grenoble, L. A., & Whaley, L. J. (2006). *Saving languages: An introduction to language revitalization*. Cambridge University Press.
- Austin, P. K., & Sallabank, J. (2011). *The Cambridge handbook of endangered languages*. Cambridge University Press.
- Fishman, J. A. (1991). *Reversing language shift*. Multilingual Matters.

## MANIPURI

### MDC45MAN102(T)25: Poetry, Prose, Grammar and Composition

**Course Objectives (COs) and Course Learning Outcomes (CLOs):** All undergraduate students must complete this introductory-level of course termed as MDC (Multidisciplinary Course) **MDC45MAN102(T)25: Poetry, Prose, Grammar and Composition** to enable to understand about the Manipuri Poetry from the period of Renaissance upto 1980's period, giving critical assessment of Manipuri essay, Novel, Drama and Short story and doing critical analysis and appreciations of the pre and post 2<sup>nd</sup> World War Manipuri Literature and its changes.enhance intellectual breadth as part of a liberal arts and sciences education.

**Course Title : Poetry, Prose, Grammar and Composition**

**Mark : 100 Marks (70m -End Sem+15m -Internal + 10m -Home Assignments+5m-Attendance)**

**Credits : 3 Credits**

**Contact Hours : 45 Hours (15 hrs x 3)**

**Academic Level: Nil**

**Course Content: -100Marks (3 Credits-60Hrs)**

#### **Unit – 1 : Poetry: -30(0.9 Credits-18 Hrs)**

Hijam Anganghal : Minai Luhongba

Dr. Lamabam Kamal : Bishwaprem

Elangbam Nilakanta : Lamangnaba

Laishram Samarendra : Mamang Leikai Thambal Satle

Bhanumati : Aroiba Wahang

Arambam Memchoubi : Androgi Mei

Ariba Sheireng : Nonglao Eshei

#### **Unit – 2 : Prose: -40 ( 1.2 Credits-24 Hrs)**

**Essay:**

Khwaitrakpam Chaoba Singh : Minungshi

Khaidem Pramodini : Chashadki Tejbad Pambi Chingakhram Pishak : Samaj Amasung Shangskriti

**Novel:**

Dr. Lamabam Kamal : Madhabigi Pukchel Hongba (*Madhabi Upaniyastagi*)

**Short Story:**

Rajkumar Shitaljit : Naknabadagi

M.K. Binodini : Nungairakta Chandramukhi

**Drama:**

Khundongbam Brojendro: Eikhoisu Jibani, Thamoi Palli (*Refugee*)

#### **Unit – 3 : Grammar -15 ( 0.45 Credits-9 Hrs)**

(i) Vowel (ii) Consonant (iii) Root, Affix (iv) Syntex – Sentence type.

#### **Unit -4 : Composition: -15 ( 0.45 Credits-9 Hrs)**

(i) Essay (ii) Comprehension (iii) Amplification

**References:**

Atoppa Khonjel, Naharol Sahitya Premi Samittee, 2<sup>nd</sup> edition, 1993

Aroiba Wahang, Sanjenbam Bhanumati. Imphal: Writers' Forum, 2001

Ch. Yashawanta, Manipuri Grammar, Yaibiren Communications, 2020

Dr. K. Bimola, *Manipuri Lonmitki Shaklon Khara*, JN Publication: Imphal, 2022

Kanchi Seireng, Canchipur: Manipur Unviersity, 1998

Mahakavi Hijam Anganghal Singhgi Seireng, (ed.), Nongmaithem Tombi, 3<sup>rd</sup> Edition, 1988

P.C. Thoudam, Remedial Manipuri, Saraswati Printing Works, 1996

Refugee, Khundongbam Brojendro, 2002

## MIZO

Course Code: MDC45MIZ102(T)25

Course Title: Mizo Thutluang (Selected Mizo Prose)

Course Level: 100

Credit Details:	Total Credit	Lecture/Week	Tutorial/Week	Total Hours / Week
	3	3		3

### Course Objective:

The course aims to enable students to critically appreciate the creative use of the Mizo language in prose while fostering an informed understanding of Mizo society, culture, and traditions as reflected through literary works. By engaging with prose texts, students will strengthen both their analytical skills and their cultural awareness.

### Learning Outcomes:

Some of the learning outcomes that students of this course are required to demonstrate are:

- Critically appreciate the creative use of Mizo Language through prose
- Develop an understanding of Mizo society, culture and tradition through prose

### Course Content:

**3 Credits**

- Unit 1:**
- (i) Literature Kan Tih Hi (What Literature Signifies) -Siamkima Khawlhing
  - (ii) Mizo Hlaa Sakhaw Thar Hnuhma (Traces of New Religion in Mizo Poetry) - Dr. R.L. Thanmawia
  - (iii) Chanchinbu Kalmang Leh A Pawimawhna (Functions and Importance of News Paper) – R.L. Thanzawna
- Unit 2:**
- (i) A Ruh No No Chhuakah (Survival Of The Fittest) - Zikpuii Pa
  - (ii) Mizo Culture Awmzia Leh a Lo Danglam Zel Dan (Historical Trajectories of Change in Mizo Culture) - Darchhawna
  - (iii) Lungawina (Contentment) - James Dokhuma
- Unit 3:**
- (i) I Hmelma Haw Rawh (Hate Your Enemy) - Darrokima
  - (ii) Duh A Piang Leh Duh Dana Piang Kan Ni Si Lo (We Are Not Born By Our Own Will or Desire) - James Dokhuma
  - (iii) Tlemte Ka Chhiara Ka Pass Tho (I Read Very Little, Yet I Manage To Pass) - Zikpuii Pa
- Unit 4:**
- (i) Ai Ka Laih Saih (Students And Politics) - H. Lalrinfela (Mafa-a)
  - (ii) Welcome to Mizoram - Vanneihluanga
  - (iii) Rokunga Hunlai Mizoram (Mizoram in the Era of Rokunga) - C. Vanlallawma

## Suggested Readings

1. Dokhuma, James. *Rilru Far Chhuak*. JD Press, Kulikawn, Aizawl. 2000
2. Darrokima, *Keimah Thingtlangpa*. LV Art, Aizawl. 2008
3. *Funki*. College Text Book (Mizo) Editorial Board Publication. 2007.
4. *Zo Kalsiam*, Mizo Academy of Letters (MAL). The RTM Press, Aizawl. 1997.
5. Khawhling, Siamkima. *Zalenna Ram: Essays on Life and Letter*. M.C. Lalrinthanga. Gilzom Offset, Aizawl. 2002
6. Vanlallawma. C. *Hringlang Tlang*. Samaritan Printer, Mission Veng, Aizawl. 2022 Print.
7. Lalsangzuala. *Derhken*. Dept. of Mizo, Mizoram University.
8. Lalthangliana, B. *Zikpuii Pa Hnuhma*. Lengchhawn Press, Bethel House, Khatla. 4<sup>th</sup> Ed. 2023.
9. Khiangte, Laltluangliana. *Mizo Thuziak Thlan Chhuahte*. LTL Publications, Mission Veng, Aizawl. 2001.
10. Lalrinfela, H. *Chawlhna Tuikam (A Juvenilia)*. Gilbert & Raymond Publication. 2002.
11. *Thanchhawn*. College Mizo Text Book Committee. Franco Press, Electric Veng, Aizawl. 1994.

**PHILOSOPHY**  
**MDC45PHI102(T)25: PHILOSOPHY & FILM**

**Course objective:**

The course aims at acquainting the student with the underlying principles of aesthetics and philosophy of film as an Art.

**Course Learning Outcome:**

At the completion of the course, the student will discover how much man's ways of looking at himself is reflected or unfolded in the Art of Film. How knowingly or unknowingly the Art of film making is in itself, and by itself, a kind of philosophical engagement with Man, Nature, and Society.

Unit I:	Study of Film as Performance Text
	1. The play of shadow and substance in Film. The problem of making the shadow more real than what it can be.
	2. The cinematographic Principle and the Ideogram. Sergei Eisenstein's dialectic approach to Film Form: The need for phenomenological understanding.
	3. Portrayal of sex, violence and Ideology in Film.
Unit II:	Learning Film Appreciation and deeper philosophizing activities – Choose any three Films as Texts from the following:
	Sankritana of Manipur. (2009) Director: Aribam Syam Sharma Producer: Sangeet Natak Akademi AFSPA, 1958 (2006) Director: Haobam Pabankumar Producer: Oli Prteous Ltd Ima Sabitri (2016) Director: Senate (Bobo) Khuraijam Producer: Masek Mangal Film Production Phum-shang (Floating Life) (2014) Director: Haobam Pabankumar Producer: Films Division, Mumbai Highways of Life (2020) Director: Amar Maibam Producer: Sangeet Natak Akademi The Silent Poet (2011) Director: Borun Thokchom Producer: Borun Thokchom Production Company: Synchronising Senses Pather Panchali (1955) Director: Satyajit Ray Producer: Government of West Bengal

**Suggested Readings:**

- Plato, *The Republic Part V, Book X. The Quarrel Between Philosophy and Poetry*. Trans., Francis MacDonalld Cornford.
- Aristotle, *On Poetics*, Trans., Ingram Bywater.
- The following selections from *Film Theory and Criticism*, Eds., Gerald Mast and Marshall Cohen; *The Myth of Total Cinema* from *What Is Cinema*, Volume 1, Volume 2, by Andre Bazin.
- *The Evolution of The Language of Cinema* by Andre Bazin, Ibid.
- *The Cinematographic Principle and The Ideogram—A Dialectic Approach To Film Form* by Eisenstein from, Eisenstein, Sergei M, *Film Form*, edited and translated by Jay Leyda, New York: Harcourt Brace.
- *Some Points in the semiotics of the Cinema* from Metz, Christian, *Film Language: A Semiotics of The Cinema*, Translated by Michael Taylor, New York, Oxford University Press.
- *The Establishment of Physical Existence* from Kracauer, Siegfried, *The Redemption of Physical Reality*, London, Oxford: Oxford University Press, 1960.
- *Film and Reality* by Rudolph Arnheim from his *Film as Art. Basic film Aesthetics* by F. E. Sparshott.
- *The Work of Art in the Age of Mechanical Reproduction* by Walter Benjamin.
- The following from the book, *Sight and Sound: A Fiftieth Anniversary Selection* edited by David Wilson and published by Faber and Faber Ltd., London, 1982.
- Sergei Eisenstein, *Charlie, The Kid*. Richard Winnington, *Bicycle Thieves*.

**POLITICAL SCIENCE**  
**MDC45POL102(T)25: Gandhi and the Contemporary World**

**Course Objectives:** The course seeks to understand Gandhian thought and examine its practical implications. It will introduce students to key instances of Gandhi's continuing influence right up to the contemporary period and enable them to critically evaluate his legacy.

**Course Learning Outcomes :** After the course the students will be able to locate Gandhi in a global frame, explain Gandhian thought and practical implications. The students will know the key influences of Gandhi in the contemporary period and enable them to critically evaluate his legacy.

**Detailed Syllabus Content**

Unit	Unit Name	Detailed Syllabus	Credit
I	Gandhi on Modern Civilization	Concept of Modern Civilization , Alternative Development and Critique of Development	1
II	Gandhian Thought	Theory of Satyagraha, Satyagraha in Action , Kheda Peasant Satyagraha and Idea of Trusteeship	1
III	Gandhi Legacy	Tolerance, Anti-Racism Movements : Anti-Apartheid and Martin Luther King; and Gandhigiri	1

**Reading List**

B Parekh, (1997), 'The Critique of Modernity', in *Gandhi: A Brief Insight*, Delhi: Sterling Publishing Company, pp. 63-74.

K Ishii, (2001), 'The Socio-economic Thoughts of Mahatma Gandhi: As an Origin of Alternative Development', *Review of Social Economy*, Vol. 59, No.3, pp. 297-312

B Parekh, (1997), 'Satyagraha', in *Gandhi: A Brief Insight*, Delhi: Sterling Publishing Company, pp. 51-63.

D Hardiman, (1981), 'The Kheda Satyagraha', in *Peasant Nationalists of Gujarat: Kheda District, 1917-1934*, Delhi: Oxford University Press, pp. 86-113

I. Knudegaard, (2010), *Gandhi's Vision for Indian Society: Theory and Action*, Master Thesis in History, University of Oslo.

J Brown, (2000), 'Gandhi and Human Rights: In search of True humanity', in A Parel, (ed.), *Gandhi, Freedom and Self-Rule*, New Delhi: Lexington Books, pp. 93-100.

P Rao, (2009), 'Gandhi, Untouchability and the Postcolonial Predicament: A Note', *Social Scientist*. Vol. 37 (1/2). Pp. 64-70.

R Iyer, (2000), 'Chapter 10 and 11', in *The Moral and Political Thought of Mahatma Gandhi*, New

Delhi: Oxford University Press, pp. 251-344.

A Ghosh and T Babu, (2006), 'Lage Raho Munna Bhai: Unravelling Brand "Gandhigiri"', *Economic and Political Weekly*, Vol. 41, No. 51, pp. 5225-5227.

D Hardiman, (2003), 'Gandhi's Global Legacy', in *Gandhi in His Time and Ours*, Delhi: Oxford University Press, pp. 238-283.

J Lipner, (2003), 'A Debate for Our Times', in Harold Coward, (ed.), *Indian Critiques of Gandhi*, New York: State University of New York Press, pp. 239-58.

R Iyer, (2001), *The Moral and Political Thought of Mahatma Gandhi*, New Delhi: Oxford University Press. pp. 344-358.

R Terchek, (1998), *Gandhi: Struggling for Autonomy*, USA: Rowman and Littlefield Publishers.

S Sarkar, (1982), *Modern India 1885-1947*, New Delhi: Macmillan, pp. 432-39.

## PSYCHOLOGY

### MDC45PSY102(T)25: Psychology in Everyday Life

**Unit-1: Introduction: Psychology: Nature, Scope and Applications (1 Credit=25 marks)** Methods of Study: Experimental, Ethnography, Cross-Cultural, Observation; and Case Study. Personality and Self, Know Thy Self: I & Me, Real-Self, Self-Concept, Self- Esteem; and Self-Efficacy, Personality: Nature, Scope and its Development (Theoretical Perspectives), Intelligence: Basic theories and modern conception, Measurement

**Unit-II: Attitude and Social Behaviour (1 Credit=25 marks)**

Attitude: Formation, Functions and Factors contributing on Change of Attitude, Social Influence: Conformity, Compliance and Obedience, Helping Behaviour- Altruism and Pro-Social Behaviour

**Unit-III: Psychological Disorders and Stressors (1 Credit=25 marks)**

Abnormality: Definition and Criteria of Abnormality, Disorders: Introduction of Psychological Disorders (DSM-IV TR & DSM-5), Stress: Concept, Types; and Related Health Problems.

**Learning Outcome:**

- It will help the student to understand the importance of psychological functions.
- The student will also understand how their unique traits and concepts are formed.
- It will also help them gain knowledge about how psychological health influence other domains of functioning.

**Reading List:**

- Gazzaniga, M. Heatherton, T. Halpern, D. & Heine Steve (2012): Psychological Science. WW Norton & Company. Inc. New York.
- Clifford T. Morgan, Richard King, John R. Weis and John Schopler (1993). Introduction to Psychology (7<sup>th</sup> Edition). Tata McGraw Hill Book Co. New Delhi.
- Larsen, R.J. & Buss, D.M. (2011). Personality Psychology: Domains of Knowledge about Human Nature. New Delhi: Tata McGraw-Hill.
- Baron,R.A.,&Byrne,D.(2004). Social Psychology. Singapore: Pearson Education
- Carson, R.C., Butcher, J.N., Mineka, S., & Hooley, J.M. (2007). Abnormal Psychology, 13<sup>th</sup> Ed. Pearson Education. New Delhi, India.

## SOCIAL WORK

### MDC45BSW102(T) 25: Communication Skills

## **Course Objective**

1. Enable students to understand communication dynamics.
2. Equip students with the desirable skills to maintain healthy relationship in personal and professional life.
3. Develop competency in students to efficiently participate in civic activities in the society.

## **Course Learning Outcome**

1. Students will understand the communication process, its importance, and apply the principles of effective communication in personal and professional contexts.
2. Students will identify and differentiate between various types, models, and styles of communication to enhance interpersonal interaction.
3. Students will develop key communication skills, including effective listening, responding, presenting, public speaking, and interviewing.
4. Students will demonstrate facilitation skills for group discussions and apply appropriate media strategies to support communication in social work practice.

## **Course Content**

### **Unit I. Communication Process**

Importance and Scope of communication, Communication cycle, Principles of effective communication, Prerequisites for practicing effective communication.

### **Unit II. Nature of communication**

Models of communication, Types of communication and Communication styles.

### **Unit III. Communication Skills**

Effective listening and responding skill, Presentation skill, public speaking skill and Interview skill.

### **Unit IV. Facilitation Skills**

Effective techniques of addressing groups Methods of facilitating a participatory discussion within a group.

### **Unit V. Media Strategies**

Types of media, Preparation and appropriate application of media, Strategies to aid communication while working with people.

## **Suggested Reading**

1. Gamble, T. K., & Gamble, M. (2020). *Communication Works* (12th ed.). McGraw- Hill Education.
2. Adler, R. B., Rosenfeld, L. B., & Proctor, R. F. (2019). *Interplay: The Process of Interpersonal Communication* (15th ed.). Oxford University Press.
3. Keyton, J. (2017). *Communication and Organizational Culture: A Key to Understanding Work Experiences* (3rd ed.). Sage Publications.
4. Verderber, K. S., Verderber, R. F., & Sellnow, D. D. (2019). *The Challenge of Effective Speaking* (16th ed.). Cengage Learning.

5. Trenholm, S., & Jensen, A. (2017). *Interpersonal Communication* (8th ed.). Oxford University Press.
6. Lucas, S. E. (2020). *The Art of Public Speaking* (13th ed.). McGraw-Hill Education.
7. Barker, A., & Gower, K. (2018). *Communication in Organizations: Basic Skills and Conversation Models*. Routledge.
8. Hybels, S., & Weaver, R. L. (2015). *Communicating Effectively* (11th ed.). McGraw- Hill Education.
9. Fiske, J. (2011). *Introduction to Communication Studies* (3rd ed.). Routledge.
10. Papa, M. J., Daniels, T. D., & Spiker, B. K. (2020). *Organizational Communication: Perspectives and Trends* (5th ed.). Sage Publications.

## **MDC45SOC102(T)25: An Introduction to Sustainable Development**

### **Course Objectives-**

This course is structured to integrate all core dimensions of education, including knowledge dissemination towards critical thinking and sustainable action. The syllabus is divided into five interconnected units that begin with foundational concepts and gradually advance toward contemporary global perspectives on sustainability. The key thematic areas include Environment, Ecology, and Biodiversity, all of which are integral to understanding current sustainability challenges. The final unit focuses on global efforts and policy executions aimed at achieving sustainable development.

### **Course Outcomes-**

This course on Sustainable Development is to cultivate moral responsibility among learners, encouraging them to become conscientious citizens, committed not only to their nation but also to the preservation of Mother Nature, who sustains life and intellect through her abundant resources. Ultimately, the course endeavours to inspire lifelong learning and action-oriented thought processes that support sustainable development at both individual and collective levels.

### **Course Content-**

1. Sustainable development: Idea and background –  
Sustainable Development: Central Theme, Scope and Nature as a Discipline, Industrialisation, Urbanisation and threats to Sustainable Development, Economic Growth and Triple ‘P’ concept.
2. Ecology and biodiversity-  
Ecosystem: Biotic and abiotic elements and their sustainable use, Ecology and Sustainability: Terms and Thoughts- Food chains, Food web, Energy flow in ecosystem, Ecological niche, Habitat, Geographical range, tolerance range.
3. Biodiversity preservation and sustainable development goals-  
Causes of Biodiversity Depletion and Strategies for Sustainable Use of Biodiversity, Endangered and Threatened Species and their sustainable conservation needs, Major Biodiversity Zones of the world, Biodiversity Hot Spots, Biomimetics and Sustainable Development.
4. Sustainable development and Urbanities-  
Sustainable City Environment: concept, Gender role in sustainable development, Education for sustainable Development: Evolutionary history of Sustainable Development ideas, Healthcare, Well-being and Sustainable Development, Millennium Development Goals (MDGs) to Sustainable Development Goals (SDGs): Agenda 2030
5. Sustainability and Executions –  
Sustainability & its factors, sustainability Needs: food security and agriculture, renewable resources - water and energy, non-renewable resources, sustainability conflicts, Clinical Economics and Development.

### **Suggested Readings-**

1. Ajay Ahlawat (2019). Sustainable development goals: directive principles for sustainable India, Notion Press.
2. Arjun Gope, Abhijit Sarkar, Prasamita Sarkar, Santanu Majumder, Kuldip Gosai (2019). Environmental Issues & Sustainable Development, Notion Press.
3. Elliott, Jennifer. 2012. An Introduction to Sustainable Development. 4<sup>th</sup> Ed. Routledge, London.
4. Franco, I. B. and Tracey, J. (2019), "Community capacity-building for sustainable development: Effectively striving towards achieving local community sustainability targets", International Journal of Sustainability in Higher Education, Vol. 20 No. 4, pp. 691-725.
5. Jeffrey D. Sachs (2015). The Age of Sustainable Development, Columbia University Press.
6. Martin J. Ossewaarde (2018). Introduction to Sustainable Development, First Edition, SAGE Publications Pvt. Ltd.
7. Santosh V. Rankhamb, Yasmeen Shaikh, T. S. Pathan, & Atulkumar R. Chourpag (2021). Sustainable Development for Future: "Insights from agriculture, Health, Aquaculture, Energy, Education and Environment, Notion Press; 1st edition.
8. Rogers, Peter P., Kazi F. Jalal, and John A. Boyd. "An introduction to sustainable development." (2012).
9. Kerr, Julie. Introduction to energy and climate: Developing a sustainable environment. CRC Press, 2017.
10. Sala, Serenella, Biagio Ciuffo and Peter Nijkamp. "A systemic framework for sustainability assessment." Ecological Economics 119 (2015): 314-325.

## YOGA

MDC45PES102(T)25: Yoga Education

3 Credits

### Course Objective:

#### Learning Outcomes:

1. The students will gain the fundamental knowledge of Yoga.
2. The study will give the importance of different scopes of yoga in life.
3. The theoretical and practical approaches will be learned.

### Course Contents

#### Unit – I: Introduction

- 1.1 Meaning and Definition of Yoga
- 1.2 Aims and Objectives of Yoga
- 1.3 Yoga in Early Upanisads
- 1.4 The Yoga Sutra: General Consideration
- 1.5 Need and Importance of Yoga in Physical Education and Sports.

#### Unit - II: Foundation of Yoga

- 2.1 The Astanga Yoga: Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana and Samadhi.
- 2.2 Yoga in the Bhagavadgita - Karma Yoga, Raja Yoga, Jnana Yoga and Bhakti Yoga
- 2.3 Preparation for yoga practice.

#### Unit – III: Asanas

- 1.1 Meaning and definitions of asanas
- 1.2 Classification of asanas and their applications
- 1.3 Effect and importance of asanas on various body system
- 1.4 Planning for practicing yoga asanas.

#### Unit – IV: Pranayama and Kriya

- 4.1 Meaning and definition of pranayama
- 4.2 Types and importance of pranayama
- 4.3 Meaning and definition of kriya
- 4.4 Types and importance of kriyas.
- 4.5 Meditation

#### Unit –V: Education and Yoga

- 5.1 Definitions of yoga education
- 5.2 Importance of yoga education
- 5.3 Difference between yogic practices and physical exercises
- 5.4 Yoga education centers in India and abroad
- 5.5 Competitions of Yogasanas.

### References:

- 1 Brown, F. Y.(2000). How to use yoga. Delhi:Sports Publication.
- 2 Gharote, M. L. &Ganguly, H. (1988). Teaching methods for yogic practices. Lonawala: Kaixydahmoe.
- 3 Rajjan, S. M. (1985). Yoga strenthening of relaxation for sports man. New Delhi:Allied Publishers.
- 4 Shankar,G.(1998). Holistic approach of yoga. New Delhi:Aditya Publishers.  
Shekar,K. C. (2003). Yoga for health. Delhi: Khel Sahitya Kendra.